

The Application Of Cost-Benefit Analysis To Volunteer Programs

By Nancy A. Moore

In the past few years there has been increasing interest among volunteer advocates in the field regarding the application of cost-benefit analysis techniques to volunteer programs. Both privately-funded and publicly-funded volunteer programs are finding out that they are competing for increasingly scarce resources and that they must find new ways of justifying their costs and benefits.¹

In the public sector in particular, there is concern with how to acquire the funds to develop more volunteer programs, especially within those government agencies receiving their support from states where significant resource constraints would appear to exist. It is becoming increasingly obvious that if expansion of the voluntary sector is to become a reality, legislators must be persuaded of the desirability of such a course of action through the presentation of some kind of analysis of either existing or planned programs. In short, in "cost-conscious times" ways must be found to justify what are believed to be necessary and important appropriations.

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A recent survey done by the Missouri Volunteer Office concerning the attitudes of state agency administrators found lack of resources may be the inhibiting factor in the expansion of existing programs and the development of new ones. This was the case both for those with volunteer programs in their agencies and those without. In response to the question, "An agency's budget is often such that it cannot sustain a volunteer program", 35% of the respondents considered this an "important obstacle" and 36% viewed it as "somewhat important", with only 29% responding that it was "no obstacle" at all.

On the positive side, it is worthwhile to note that most survey respondents believed in concept that the benefits of volunteer programs would exceed the costs. In response to the question, "The costs of volunteer programs tend to outweigh the benefits", only 3% felt it to be "definitely true" and only 7% felt it was "probably true". Sixty-four percent felt it was either "probably not true" or "not true", with 25% responding that they did not know or were not sure.

It is perhaps encouraging to volunteer advocates to see that such a large majority of agency administrators agree with the concept that benefits of volunteer programs will outweigh the costs. But the question is how to establish this in a more concrete fashion. Indeed, a quarter of the survey respondents honestly were "not sure" on this question and no doubt this

is the case with the many legislators and department directors who play a crucial role in the ultimate outcome of the competition for resources. It is imperative that volunteer programs impress upon legislators and department heads a substantiated case for additional support in this area. The Missouri Volunteer Office survey found that most volunteer programs in the state presently give little thought to the calculation of costs and benefits and that, regrettably, many do not even have needed record-keeping systems. This is understandable, for certainly cost-benefit analysis is an issue fraught with confusion, ambiguity, and an aura of "mystery". But it need not be so. *The purpose of this paper is to attempt to put cost-benefit analysis for volunteer programs into perspective; to examine what cost-benefit analysis is and what it involves; and to explore ways in which it might be applied to the evaluation of the volunteer programs.*

The most common criticism advanced regarding the application of cost-benefit analysis to volunteer programs is that the benefits of such programs are impossible to measure. A common attitude expressed by survey respondents in answering the cost-benefit question was that the benefits from volunteer programs are "immeasurable in monetary terms" and that these benefits constitute "intangible assets". This is true of many government programs and is a fact often emphasized in the professional literature. As Robert Dorfman writes, "the government tends to intervene in precisely those markets in which prices are either lacking or are seriously divergent from social values. It is inherent in government enterprises...that market prices cannot be used in appraising their social contributions."² Dorfman would probably categorize volunteer programs as contributing to "goods that are characterized by external economies of consumption", which is to say that "the consumer of (the) goods or service is not the sole beneficiary, and the amount he is willing to pay does not measure the entire value of the good to society."³ But at the same time, Dorfman does not conclude that cost-benefit analysis should not be attempted but says that "*some economic basis is needed for judging which potential government undertakings are worthwhile and which are not*" and that "*benefit-cost analysis provides this basis*".⁴

Other writers, too, have dealt with this question of "intangible" or "incommensurable" costs and benefits, which is to say, costs and benefits that either cannot be quantified or if they can be quantified, "cannot be valued in any market sense".⁵

What is most important to note is that in dealing with this question, all of these writers appear in agreement with Dorfman's conclusion that it is not a factor that precludes analysis, although they would hold that it is a factor that may alter the specific cost-benefit approach undertaken (Feldstein, 1964:356-7; Howard, 1973:116; Prest & Turvey, 1972:87; Rady, 1974:123). In fact one writer, Hussein Rady, feels that "*it is necessary to emphasize that there does not exist yet a clearly defined and universally accepted method of cost-benefit analysis, nor can there be one, since cost-benefit analysis 'is a way of thinking'*".⁶ Richard Layard concurs with Rady and goes somewhat further, stating that "*there is no problem, public or personal, to which its broad ideas could not in principle be applied*".⁷

Thus despite the acknowledged difficulties, it is generally believed that cost-benefit analysis can and should be attempted in any area of government activity, with the approach altered to fit the circumstances. The question then becomes what form of cost-benefit analysis is most appropriate to volunteer programs. I would submit, after reviewing the literature on cost benefit analysis, that the approach most appropriate to volunteer programs is the somewhat modified version of cost-benefit analysis known as cost-effectiveness analysis. And this is precisely so because of the difficulty of being unable to quantify benefits discussed earlier. The cost-effectiveness approach is particularly suited to those areas where the benefits are totally incapable of monetary valuations. As Layard says, "*whenever cost-benefit analysis becomes impossible, since the benefits cannot be valued, it is still useful to compare the cost of providing the same benefit in different ways. This is called cost-effectiveness analysis and is regularly used in defense, public health and other fields. Apart from not valuing benefits, the procedures are exactly the same as in cost-benefit analysis*".⁸

The procedure for cost-effectiveness analysis is explained in more concrete terms by S. Kenneth Howard and a careful reading of his explanation will suggest its applicability to volunteer programs. According to Howard:

"In cost-effectiveness studies, one factor (either cost or effectiveness) is varied, but not both simultaneously. In other words, alternatives are evaluated in terms of the amount of the objective (effectiveness) they accomplish for a given

cost, or for their ability to accomplish a fixed objective (that is, to achieve the desired level of effectiveness) at a reduced cost. This form of analysis requires that either the costs to be incurred or the objectives to be accomplished be fixed before the other grouping of factors can be varied."⁹

A volunteer program analysis using this approach would work from a fixed objective, which is closely related to the mission of its sponsoring agency or is more or less an extension of that agency's purpose. It would show the variation in cost between using paid employees to accomplish the objective and the cost of coordinating volunteers to do the work. Although there are costs involved in coordinating volunteers and they do "require a significant investment of staff time and agency money",¹⁰ a cost-effectiveness approach such as this will serve to clearly portray their inherent advantages in terms of cost-effectiveness and their capacity to "minimize costs for a desired level of...benefits."¹¹

Those who may hold reservations about the value of this kind of analysis for volunteer programs may feel that volunteer advocates have no rationale for working from a fixed objective--outside the fact that one has to begin somewhere--and that, given the political uncertainties, the analysis will not really change things much. However, there is the notion alluded to earlier, that the objectives of a volunteer program do not vary that drastically from those of the sponsoring agency. Volunteer jobs are considered a form of "supplementary assistance" (Bolstad & Ginsberg, 1962:56) meaning that their contribution, while undeniably unique, is in itself an extension of the mission of the agency. Thus what we are in fact talking about is "selecting alternative approaches to the achievement of a benefit already determined to be worth achieving, i.e., the benefit is taken for granted (having been defined as politically desirable)" with the object of analysis "to ascertain the minimum cost of achieving it."¹² This positive concept needs to be kept in mind and emphasized in the analysis for it could be very influential in a political context if and when the possibility arises that additional appropriations will be made in the interest of raising the level of benefits provided by an agency.

The implication here is, of course, that recognition of the political arena in which an analysis will be examined is very important. After all, the desired recipients of the analysis are those with decision making power and influence over

resources. Consequently, the analysis must be designed with their perspective in mind and be concerned with generating political acceptability. As Newton says, "like the individual, local and central government must operate within resource constraints" which "tend to depend upon what is politically acceptable as much as what is economically feasible."¹³ Elaborating further, he says that "at the highest level, resource allocation decisions are guided by political ideals and moral philosophy" and thus take place "within political objectives."¹⁴ Hence volunteer advocates will want to stress the connection between volunteer programs and the already established political objectives evidenced in the very existence of agencies, as well as to stress the ideas that make volunteerism part of our entire nation's "moral philosophy", and which are ideas that can be operationalized.

Some would even question whether the issue is really the unavailability of resources or whether it is equally an unwillingness to change. Howard is of the opinion that "resource limitations may be real in some instances but imaginary in others. Often what is lacking is the desire to use the resources available or to make the changes required to get the most effective results from the resources that are tapped."¹⁵ It is to be hoped that persistent efforts to present analysis to decision-makers will at long last jar some of this inertia and bring an end to indifference through the clear illustration that volunteer programs are an alternative that can "maximize the difference between social benefits and social costs", the latter commonly assumed to be the aim of most decision-makers (Dasgupta, 1972:21).

Those conducting the analysis should be prepared to deal with some of the very reasonable doubts that may enter into the minds of the decision-makers. One critical question is posed by Charles N. Lebeaux and that is, "How can the volunteer-part time and irregular in his contribution, technically untrained, without specific organizational role, outside the chain of command --fit into (the bureaucratic) framework...?"¹⁶ That is, how can sizeable consistent benefits reasonably be assured under circumstances such as these? *The answer is not an easy one, but at the very least volunteer advocates can point to one thing that is known through experiences of the past and that is that "a volunteer coordinator is a prerequisite for a well-defined functioning program"*¹⁷ and that without the appropriations to support this expense, consistent benefits certainly cannot be assured.

Additional points that the analyst thinks the decision-maker might raise should also be considered by the individual analyst beforehand and be included in the analysis. The important point to be remembered is, of course, that the goal of any form of cost-benefit analysis must be to provide the decision-makers with more and better information than otherwise available and to present that information in a readily accessible form.

Hence, it is stressed that the volunteer program analyst must consider the decision-maker by anticipating his questions and by emphasizing the contribution of volunteer programs to the maximization of political and economic objectives. The greatest force behind the latter emphasis on maximizing objectives, indeed its major vehicle, will be the specifics of cost-effectiveness analysis itself; it will be the detailed aspects of the analysis that will provide the critical evidence, the crucial substantiation. The next consideration then must be what detailed procedure could be followed to establish the case for the volunteer program.

First, it should be said that the volunteer advocate need not be intimidated by the word "analysis" nor by the necessity for complicated "techniques" that it always seems to imply. As Howard says, "often detailed and complex studies are not necessary" and "much less sophisticated appraisals may produce adequate results". He suggests that "a more formal and thorough definition of the problem, but still not a detailed analysis, may be given in an issue paper".¹⁸ *For the purposes of volunteer program analysis we may want to think in terms of creating an issue paper of sorts, seeing as most of the analysis--beyond the estimations of costs--will not be quantifiable and much of the evaluation will be of a normative character.*

The first thing one would want to consider writing into the issue paper would be a specification of objectives or, put another way, a listing of the "criteria for success". Often these will constitute a list of abstract goals that one hopes to accomplish via the volunteer program and will be "inextricably related to benefits" (Levine, 1968:175) that one hopes to be able to provide.

Several writers afford ideas about what these objectives might be. On a level perhaps too broad for our purposes, the objective or criterion for success might simply be 'doing good' in some sense" (Kershaw, 1970:136). Or the goal might be "to help

individuals function better" (Rivlin, 1970:507) or to enhance "the integrity and well-being" of the client and chance "his attitudes and behavior" (Levine, 1968:176, 174). Schlosser writes that volunteers were used in the Illinois Department of Children and Family Services to "assure better service to clients" and to "supplement the work of salaried staff...enrich the lives of clients by making possible auxiliary services for which the department (had) neither staff nor specific legislative mandate" and to "bring about greater public understanding of the department and its work".¹⁹ Bolstad and Ginsberg write that volunteers used in state mental hospitals in Indiana served the goals of improving patient attitudes and bettering hospital atmosphere as well as serving the objectives of improving patient rehabilitation and improving the integration of the hospital into the community (Bolstad & Ginsberg, 1962:53-6).

Thus there are many different ways the objectives can be described and the list of objectives will always differ from program to program. Along with the objectives, it is conceivable that one could list the type of jobs or volunteer activities that exist, or would be developed, to accomplish the objectives, supplemented with brief descriptions of these jobs or activities. The purpose of this would simply be the provision of more information for the decision-maker. The decision-maker knows that the skills and talents of volunteers are used to meet the objectives but may want to know how or in what specific ways. The analyst can provide this information and should make every attempt to do so.

The next step would be to itemize actual or estimated costs of coordinating volunteers to meet the objectives, dividing costs into those that are direct and those that are indirect. Volunteer programs that are extensions of government agencies will face at least two major problems in this area. One problem, which Steve Barshy says is "the most obvious", is the lack of good accounting data because "for some reason, all levels of government have been slow to adopt accounting practices that permit cost calculations for specific activities within any one agency", resulting in a "dependence...on educated guesses for determining program costs".²⁰ The Missouri Volunteer Office found evidence in support of this contention in its survey of volunteer programs in state government, leading to a recommendation that more educational efforts be directed towards the development of record-keeping forms and procedures. In any event, this

essential part of the analysis may require rather extensive searching and force existing programs to bring their records up to date.

A second problem, on which there is conflicting advice, is what Barsby calls the "joint-cost problem". This problem arises "when a given expenditure (e.g., for a capital facility or administrative services) serves more than one activity, either simultaneously or in sequence", forcing one "to decide what portions of those costs to allocate to various activities".²¹ Barsby suggests that there may be justification for ignoring them because these costs are in essence "sunk costs" and in many cases are not increased by the presence of a particular activity. He says there is no "right" way to do this. Howard, on the other hand, says that "all pertinent costs should be recognized in evaluating an alternative" for the analysis to be complete, including "the costs incurred in using established facilities for a particular program".²² *It would appear that attempts should be made to evaluate as many of the costs as possible within the limits of available staff capability, time, and money.*

Despite these problems the analysis should include the breakdown of direct and indirect costs. For volunteer programs, *direct costs* may include the following: value of the time put in by the volunteer coordinator; costs of direct time put in by other personnel, such as secretaries; costs of plaques, pins, or certificates; mileage expenses; parking fees; meals; babysitting; costs of professional training for the coordinator; costs of appreciation dinners or luncheons; value of any stipends; printing costs for newsletter, orientation manuals, etc; costs of paper and office supplies; worker's compensation or other types of insurance. Costs generally falling into the category of *indirect costs* are: office space; utilities; value of staff time spent working with volunteers; costs of training volunteers; costs of keeping records; value of equipment (desks, chairs, typewriters, copier, etc.) used up by the volunteer program; costs of telephone service. Most programs will not have all of these costs and some may have other costs not mentioned here. This list is simply offered as a guide to the type of things to be considered.

Once the value of the costs or inputs has been established, the next step is to specify what the output of the program is. For volunteer programs, output is usually measured in terms of the total number of

service hours contributed by volunteers. To provide more information to the decision-maker, it is preferable that these hours be broken down into the approximate number of hours spent by volunteers in specific roles or activities, such as the number of hours of volunteer time spent in recreation activities, visitation, clerical work, and so forth. One might also include the number of clients affected by various activities. These breakdowns are probably quite important, as they give the decision-maker a better idea of what government money is buying in terms of services. Here again the lack of adequate records may pose problems and very rough estimations may have to be made.

At this point the information is in hand to compute some measure of cost-effectiveness. A concept established earlier in defining cost-effectiveness and relating it to volunteer programs was to compare the costs of coordinating volunteers to the costs of using paid employees to do the same work. The formula to use in this case, according to HEW's Office of Human Development would be the following:

$$\begin{array}{l} \text{total hours of service divided} \\ \text{by 2080} \\ \text{(number of hours of full time jobs)} \\ \\ = \\ \\ \text{number of full time jobs equi-} \\ \text{valent to volunteer time} \\ \text{contributed} \end{array}$$

Then from this one could compute a value by specifying some average salary for a full time job and multiplying this by the number of jobs found to be equivalent to volunteer time contributed. A comparison of this figure to the costs of inputs would establish the cost-effectiveness of using volunteers rather than paid staff, given fixed objectives.

There are other formulas that can also be used and are actually probably more frequently used than the one described above. Two other formulas believed to be useful for calculating cost-effectiveness, again as indicated by the Office of Human Development, are as follows:

$$\text{dollar worth of service} = \text{hours} \times \text{minimum wage } (\$2.65)$$

$$\text{dollar worth of service} = \text{hours} \times \$4.86 \text{ (the Wolozin formula based on proportion of GNP volunteers contribute)}$$

These figures would then be compared with the cost of inputs, as before, to determine cost-effectiveness. A typical figure that would result would be the number of times output, however valued, is greater than program cost inputs (Ulm, 1977-:9), or in other words, the ratio of program output to cost input.

Another alternative for establishing the value of hours is for the analyst to consider each type of job individually and consider the general wage rate for that type of work, either nationally or within the agency's locale. The rationale for this is that all wage rates for valuing volunteer time should be consistent with those paid for similar work in the labor market. Wage scales such as these have been developed by OEO and are available.

A few other calculations could also be made if desired such as certain program unit costs (Bretning-Miller & Hill, 1976:9). One could figure the *cost per volunteer* by dividing total program cost by the number of volunteers involved; or one could figure *cost per client* served by dividing total program cost by number of clients served; or figure the *cost per service hour* by dividing total program cost by the number of hours of volunteer service. Each might be useful for providing additional information to those reading the analysis and would be especially useful if any evaluative comments or interpretations could be made from them.

The next major procedural component to be dealt with is that of specifying *benefits*. A distinction should be noted here as to the difference between benefits and outputs. Too often the mistake is made of assuming that the money value of the hours contributed, once calculated, is the money value of the benefit. But it should be clear at this point that hours of service to clients is the output and the significance of the money value of those hours is simply its place in determining cost-effectiveness. If one wants to argue that cost-effectiveness is itself a benefit, that is quite another issue. *But it must be realized that outputs only produce benefits and these benefits do exist in some form even though they defy measurement.*

Edith Exton, in writing about cost-benefit analysis in education, helps clarify this issue of the difference between outputs and benefits. She says that outputs are the more immediate measure and, in the case of education, consist of such things as the number of school districts receiving aid or the number of students enrolled in aided schools. On the other hand, benefits are

accomplishments or achievements--the ultimate output measure so to speak. These are such things as higher educational attainment on the part of disadvantaged children participating in the program as measured by tests or reductions in the school dropout rate (Exton, 1967:15-16).

Alice Rivlin's experience in the Department of HEW, as she presents it, perhaps sheds further light on this issue. She says that measures of the outputs of individual programs might be such things as "hospital beds constructed, teachers trained, patients served, persons participating in basic literacy programs, etc." She says that "at best, these output measures are rough guides to what the program is buying" and can be useful in showing what would be given up if money is shifted from one program to another. *Such statistics are better than no information on what the program is buying, "but they do not throw much light on what is actually being accomplished. They do not tell...what the program is contributing to the health or education or welfare of the nation".²³*

The issue is then raised that if benefits are to be viewed in this way, it will often not be possible to attribute specific benefits to any one individual program. Several writers agree that this is frequently the case. Howard says that "it is often impossible, particularly in social service programs, to isolate the effects of different programs and other contributing factors. Too often systematic studies are based on highly debatable inferences as to what has been caused by what".²⁴ It is the monumental question of how to "disentangle" effects (Rivlin, 1970: 507), given that there are more influences acting upon outcomes than just the particular program under analysis, from the simple passage of time to other government programs (Kershaw, 1970:134). Hence benefits are not only difficult to quantify but are also difficult to specify and in many areas we find that outputs are better spoken of as producing "contributory" benefits.

But still one will want to include something about potential benefits in the issue paper. It was previously established that most of the benefits of volunteer programs would be intangibles or incommensurables that could not be valued in money terms. Yet to totally ignore them would be a great mistake for often decision-makers will not have given great thought to even the abstract benefits that might be contributed to the individuals involved or to the society as a whole. As Prest & Turvey

say, such intangibles "are obviously important in many cases and, equally obviously, have to be presented to the decision maker in the prose which accompanies the...arithmetic, since they cannot be incorporated in the arithmetic itself."²⁵

It would appear that the analyst could break benefits down into two areas, one being the more immediate, local benefits and the other being the more abstract, all encompassing benefits. For examples of immediate, local benefits that could be listed, one might consider the following: improved attitudes or improved morale on the part of the patient or client; improved atmosphere for patients or clients; improved relations between the agency and the community; increased quantity of services; improved quality of services; hastened resocialization or rehabilitation of certain kinds of clients; improved information through volunteer feedback; career re-entry for women; job creation; individual career experience. The list could go on and on and is perhaps only limited by the imagination of the analyst. The second area would be the more all-encompassing benefits which also tend to be at an even higher level of abstraction. These benefits would be such things as increased citizen involvement and the educational experience it provides, increased participatory democracy, improved citizenship, and increased attention to basic human needs. These, too, can no doubt be expanded upon. One thing well to note here is how closely related the benefits outlined are to the listing of objectives discussed earlier.

An optional feature of the benefit listing might be to list the various parties or groups that would be affected by the volunteer program and which benefits accrue to which particular group. Here also could be noted the costs to any of these groups. The purpose of this would simply be clarification for the decision-maker. For volunteer programs, the groups listed might be (1) the agency staff; (2) taxpayers; (3) current clients; (4) new clients; (5) the volunteers; and (6) society in general. A choice to use such a format might be guided by whether or not such an approach would provide useful and significant information to the decision-maker or whether it might give greater prominence to important, key points.

Besides listing the benefits in some fashion, one would also want to provide some kind of support for a belief in the presence of such benefits. Since we have established that a quantified support in monetary terms is not possible, we must turn to some form

of normative support, that is support consisting largely of qualitative judgments expressed in some fashion, through some medium. Evaluations by individuals, records of interviews, and surveys have been suggested as possibilities.

Howard observes that "evaluations might be made by participants such as agency managers or members of the clientele themselves...managers can evaluate programs as well as their own performance. Except for voting and the general workings of the political process few devices have been developed for getting clientele evaluations". As to survey research, Howard says that "survey research, although rather expensive, may have potential for evaluating state programs and has been attempted in the field of vocational rehabilitation".²⁶ Prest and Turvey are also among those pointing to "consumer questionnaires" as a possible means of gaining an idea of the importance of those intangible benefits that cannot be quantified (Prest & Turvey, 1972:87).

Layard, on the other hand, provides the reasoning underlying such efforts. He writes: "If we assume that only people matter, the analysis naturally involves two steps. First, we must find out how the decision would affect the welfare of each individual concerned. To judge this effect we must ultimately rely on the individual's own evaluation of his mental state....The second step is to deduce the change in social welfare implied by all the changes in individual welfare."²⁷ This seems to be a good rationale for the use of individual evaluations and surveys, especially when primarily intangible benefits are involved. The greatest drawback of such approaches is that those with negative opinions might be afraid to express themselves and there is danger of one-sidedness. And what's more, it might provide decision-makers with a justifiable excuse for regarding the results lightly.

From this, one can sense some implications. For one thing, the evaluations must be balanced and admit areas where goals have not been entirely reached. This need not be detrimental to one's cause. Therefore, a crucial question to be answered in an interview or survey might deal with the issues of how things have changed since the volunteer program was initiated. For example, clients or agency personnel affected by the program might be asked if they perceive various differences because of the program or if they feel something has been added because of the program, with the responses rated on a scale for

the degree of intensity of the feeling. The possibilities of course are endless and here again limited only by the ingenuity and imagination of the analyst.

It is more than obvious that any evaluation of benefits will be extremely subjective and that, for the time being, choices among social programs will continue to be made primarily on the basis of cost comparisons rather than on a comparison of measured benefits until better techniques can be developed for "measuring the diffused benefits of any social programs" (Report of the Subcommittee on Economy in Government, 1967:7). Specifically, emphasis in the future needs to be placed on "measurement of the intangible social and psychological benefits" (Levine, 1968; 176, 183). Until such developments appear, it is probably wise not to rely most heavily on the measurement of benefits for fear of being rejected out of hand, charged with presenting unreliable information, of questionable validity as evidence.

What has been attempted here is to suggest methods and procedures that might be used to apply the cost-benefit analysis approach to government sponsored volunteer programs and to suggest important issues that might be raised and emphasized. *The key to the whole process would appear to be innovation for there is certainly no consensus of opinion about proper procedures to be followed, even after fifteen or twenty years of development. There is no "right" or "wrong" method although there are undoubtedly degrees of quality. What is required is fresh and inventive thought as well as a substantial measure of determination and concern, for it is a process that will take considerable time and a good deal of effort, with favorable results far from assured. It is trite, to say the least, to make the appeal that "we must start somewhere" but this is essentially the issue before us. Little analysis of this type has been conducted in the volunteer field and it would appear to be time at last for beginning to focus attention on the cost-effectiveness of programs with impressive but immeasurable benefits.*

FOOTNOTES

1. Helen Drotning-Miller and Mary M. Hill, "Documenting Program Costs and Achievements"; Synergist, Winter 1976, p. 7
2. Robert Dorfman, "Introduction", in Measuring Benefits of Government Investments; ed. Robert Dorfman (Washington, D. C.: The Brookings Institution, 1965), p. 6
3. Dorfman, pp. 4-5
4. Dorfman, p. 6
5. A. R. Prest and R. Turvey, "The Main Questions", in Cost-Benefit Analysis: Selected Readings; ed. Richard Layard (Baltimore, Maryland: Penguin Books, Inc., 1972), p. 87
6. Dr. Hussein Rady, "Cost-Benefit Analysis: Instrument for Evaluating Public Projects", Intereconomics; 4 (April 1974), p. 122
7. Richard Layard, "Introduction", in Cost-Benefit Analysis: Selected Readings; ed. Richard Layard (Baltimore, Maryland: Penguin Books, Inc., 1972), p. 9
8. Layard, p. 29
9. S. Kenneth Howard, Changing State Budgeting; (Lexington, Kentucky: Council of State Governments, 1973), p. 128
10. Donald H. Schlosser, "How Volunteers Can Strengthen Child Welfare Services", Child Welfare; 48 (December 1969), p. 12
11. Ajit K. Dasgubta and D. W. Pearce, Cost-Benefit Analysis; (New York, N.Y.: Harper and Row Publishers, Inc., 1972), p. 114
12. Trevor Newton, Cost Benefit Analysis In Administration; (Oxford: Alden Press, 1972), p. 236
13. Newton, p. 16
14. Newton, p. 16-17
15. Howard, p. 32
16. Charles N. Lebeaux, "What of the Future?" in The Citizen Volunteer; ed. Nathan E. Cohen (New York: Harper & Brothers, Publishers, 1960), p. 244

17. Charlotte W. Michener and Hank Walzer, "Developing a Community Mental Health Volunteer System", Social Work; 15 (October 1970), p. 67
18. Howard, p. 174
19. Schlosser, p. 607
20. Steve L. Barsby, Cost-Benefit Analysis and Manpower Programs; (Lexington, Mass.: D. C. Heath and Company, 1972), p. 13-14
21. Barsby, p. 14
22. Howard, p. 115
23. Alice M. Rivlin, "The Planning, Programming and Budgeting System in the Department of Health, Education and Welfare; Some Lessons From Experience", in Publication Expenditures and Policy Analysis; ed. Robert H. Haveman (Chicago: Markham Publishing Co., 1970), p. 506-7
24. Howard, p. 156
25. Prest and Turvey, p. 87
26. Howard, p. 157
27. Layard, p. 10
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