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COST EFFECTIVENESS ANALYSIS: A CASE STUDY* #3, Nov. 1977

Introduction

The purpose of this article is to provide an insight into the utility to administrators of using cost-effectiveness to evaluate criminal justice agencies. Specifically, 1) cost-benefit analysis is contrasted with cost-effectiveness analysis and 2) a case study of cost-effectiveness is presented using pretrial release.

Cost-effectiveness and the Administrator

Cost-benefit analysis is a method to assess the costs, on both the governmental and societal levels, that will result from a particular project and then to compare those costs - usually in the form of a ratio - with the financial benefits attributable to the program. Costs can include government expenditures within program budgets, indirect costs as "foregone alternative" uses of staff, etc. Likewise, benefits can include expenditures on pretrial incarceration and court processing, preserved wage earning of employed defendants, etc.

Several characteristics of cost-benefit analysis make it unsuitable for use by local administrators and budget officials. These characteristics are not necessarily deficiencies in cost-benefit analysis, but rather derive from the needs and constraints under which decision-makers operate. First, cost-benefit analysis takes considerable time to conduct. This has important consequences to an administrator of an ongoing program who must operate within relatively short budgetary periods. Second, cost-benefit analysis can be expensive. Unless a program has access to free university researchers or a staff economist, the alternative is to employ a consulting economist - an added expense few programs could accommodate. Third, cost-benefit studies generate final reports that are overwhelmingly complex and prohibitive in length. Analysts often fail to realize that few local decision-makers possess either expertise in the economics of public goods or the time to read detailed work. Fourth, factors such as discount rates, opportunity costs and shadow pricing - based on sound economic principles - may appear to a decision maker to be a mixture of fact and speculation rather than hard data. Fifth, cost-benefit analysis attempts to assess the total impact of a program wherever its influence can be documented. It does not matter to the analyst if costs of a pretrial release program are the full responsibility of a single funding jurisdiction, while the benefits can fall across regional, state, or county boundaries. The local decision-maker is most concerned with costs and savings "here at home."

Cost-effectiveness provides a method which overcomes, to a large extent, the inherent problems of cost-benefit analysis. First, it requires an explicit statement of project goals - something often overlooked in cost-benefit studies. A statement of goals provides a point of reference by which final conclusions may be interpreted. Second, cost-effectiveness analysis is more timely and usually less expensive. The analysis can be completed in a matter of weeks. Most data required in the study can be obtained directly from budget and expenditure statements. An analysis can be done by project personnel who are familiar with basic evaluation techniques. Third, cost-effectiveness analysis is easily understood,

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requiring of the reader only basic knowledge in budgetary accounting. Final reports are generally short and concise, making it much more likely that they will be read. Fourth, cost-effectiveness analysis is relevant to the needs of local decision-makers for information addressing short-term operations. Inquisitive budget committees are naturally impressed with well-documented reports showing cost-effective operations. Fifth, the precision with which variables can be measured and costs documented, means that the study is much less vulnerable to charges of bias or inaccuracy.

A Case Study: Pretrial Release

This section presents the five major steps in assessing cost effectiveness, with illustrations based on pretrial release programs:

- ① Step 1: Cost-effectiveness requires a secondary study to determine the program's impact on the clients. Expressed in other terms, what would have happened to the defendants, who are program clients, if the program were not operating? A valid estimate of this impact can be obtained by using a quasi-experimental design. ^{1/}

Generally, the study should determine differences in failure-to-appear, detention time, rearrest, etc. for program clients and the comparison group.

- ② Step 2: The information developed in step one is used to determine the impact of the program on the criminal justice system. Some key questions include -- how many jail days were avoided as a result of the pretrial release project? Did those receiving program services show a higher failure-to-appear rate than normally experienced? How does the rearrest rate for those receiving services compare with those not receiving services? Did the program clients ultimately experience fewer convictions or receive lighter sentences?
- ③ Step 3: The cost of operating the program is determined. This involves obtaining expenditure reports and accounting for any costs relevant to program operations. Costs attributed to initial start-up expenses should be excluded. Judgement must be used when personnel or facilities that are external to the program appear. Many times these involve fixed costs which are not affected by release agency activities (e.g. cost of building a new jail). A general rule-of-thumb would be to include the cost if the presence or absence of the pretrial release program

^{1/} The design question requires a separate analysis and is not reviewed in this paper.

would result in an actual change in criminal justice expenditures. A common practice that should be avoided is prorating the cost of every individual agency participant, when only very small portions of their time are spent with pretrial release defendants

- Step 4: Savings to the criminal justice system resulting from pretrial release should be calculated. This is done by first determining the costs incurred with traditional processing and then utilizing the information obtained from step 2, to calculate those costs avoided by pretrial release participants. Traditional processing costs (i.e. jail costs) should, as in the case of program costs, include only variable factors. Cost per inmate-day figures often supplied by correctional officials should be accepted only when fixed costs such as jail construction are not included. Only day-to-day costs of operation should be used.
- Step 5: The findings should be presented in a clear and unambiguous fashion. Two forms are most often employed. One method is to list the total savings (program costs subtracted from costs of traditional processing) in one figure. An advantage of this method is that estimates can be made of savings at different funding levels. The other form of presentation is the savings-cost ratio. Often used by the cost-benefit study, the ratio is formed by dividing program savings by the program costs.

Summary and conclusions

This paper described the differences between cost-benefit and cost effectiveness studies. Assessment of cost-effectiveness is more applicable and useful to both pretrial administrators and to decision-makers. Although it takes considerable effort to complete (though far less than cost-benefit), a cost-effectiveness study is relatively easy to compute, easily understood, and persuasive.

*This is a preliminary report of a larger study by the Pretrial Services Resource Center. Kirby is a Research Associate at the Resource Center, while Corum is a student research intern.

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