

COST-BENEFIT ANALYSIS

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What is Cost-Benefit Analysis?

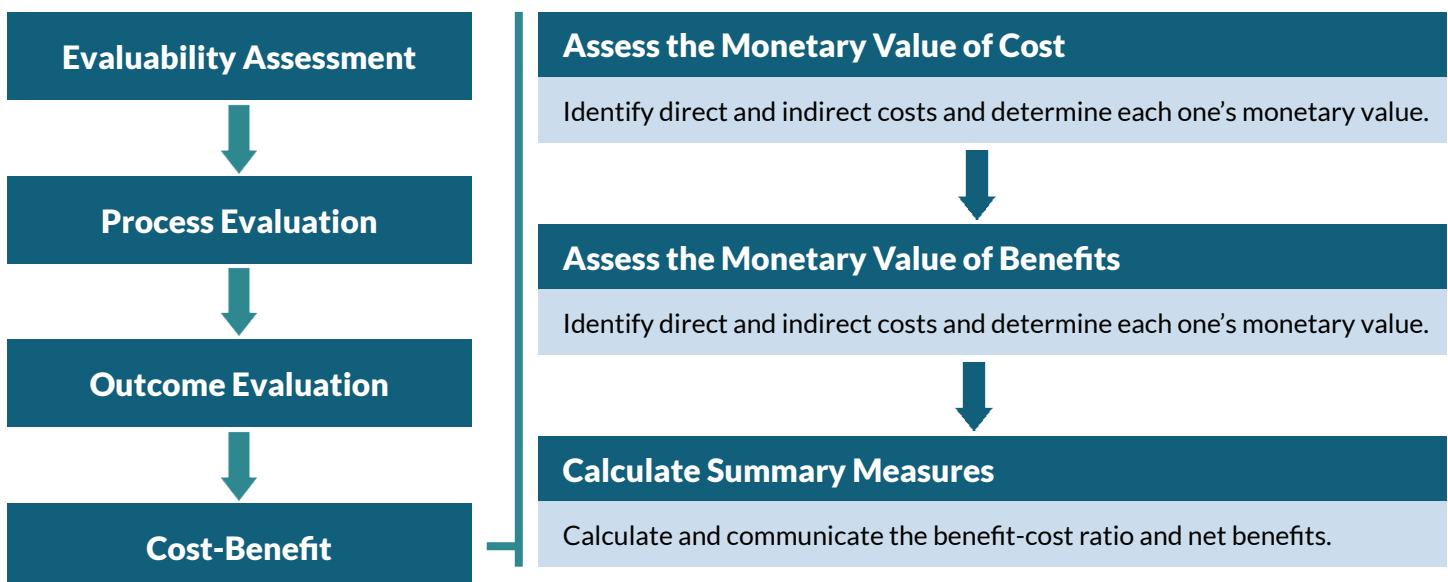
Cost-benefit analyses (CBAs) aim to assess the impact of a project or policy by reporting and comparing benefits and costs after standardizing them into a common monetary measure (usually dollars). For example, a CBA of an intervention to decrease gun violence can compare the cost of running the program (e.g., paying staff, buying equipment) with the savings that result from the program (e.g., fewer hospital visits, increased workforce participation).

A strength of CBAs, also known as benefit-cost analyses, is that they account for the fact that costs often occur in the immediate future, while benefits occur in the distant future. This method allows you to consider all costs and benefits over time, even beyond the length of the intervention. Organizations can use CBAs to demonstrate transparency about their program to stakeholders or to make the case for additional resources to funders.

What steps are involved in a cost-benefit analysis?

To conduct a CBA, you must determine the cost of running a program and the benefits that will result from the program. CBAs depend upon the ability to assign or estimate a monetary value for each cost and benefit; if a monetary value cannot be estimated, the cost or benefit cannot be included in the analysis.

PROGRAM EVALUATION



1. **Assess the monetary value of costs.** Costs may be direct (e.g., equipment, staff salaries, and overhead) or indirect (e.g., wages lost when a person participates in an intervention). A program may use secondary data to infer indirect costs or to collect primary data by interviewing or surveying program participants about their experience. Costs can also be intangible, such as psychological harm or a decline in life satisfaction. Intangible costs may be estimated from national estimates in prior studies. If you cannot determine the monetary value of an intangible cost, it should not be included in the CBA; instead, it should remain an important consideration when evaluating a program or policy.
2. **Assess the monetary value of benefits.** Similar to costs, benefits can be direct (e.g., medical expenditures saved), indirect (e.g., potential increased earnings), or intangible (e.g., sense of improved safety). Benefits are generally harder to measure than costs. If you can assign or estimate a monetary value for a given outcome, it can be included in a cost-benefit analysis. Two methods to assess indirect benefits are inferred and stated preferences. For example, to measure the benefit of an intervention aimed at decreasing neighborhood crime rates, one can either look at the labor market (inferred) or survey people (stated) to see how much more people would be willing to pay in rent to live in a lower crime neighborhood.
3. **Calculate summary measure(s).** The most common summary measures are the benefit-cost ratio and net benefits. A benefit-cost ratio is the sum of the program's benefits divided by the sum of its costs. The result is a summary measure that states, "For every dollar spent on the program, X dollars are saved." If the result is greater than \$1, it suggests that the benefits outweigh the costs. Net benefits are found by subtracting the total amount of costs from the total amount of benefits. If net benefits are greater than zero, the program shows a positive return on investment.

BENEFIT-COST RATIO
= Total Benefits ÷ Total Costs

NET BENEFITS
= Total Benefits – Total Costs

How do I conduct a cost-benefit analysis?

- Gather cost data and documents, such as internal budget documents, organization or program financial reports, employee salaries, and proposal budgets. Work through these documents to identify each specific line item associated with the program(s) being evaluated.
- Develop a logic model to identify benefits. Understanding the "logical" sequence of events that result from a program or intervention can help to identify immediate and longer-term benefits.
- Gather benefits data and documents. Your organization or program may have existing data and documents to help identify and measure benefits, such as evaluation surveys, outcomes studies, or financial reports. If this data does not already exist, you can collect it through surveys, interviews, or quantitative research comparing pre-intervention and post-intervention outcomes.
- Ensure accurate monetary estimates by adjusting for inflation when measuring benefits in the distant future.
- Ensure quality data by maintaining high standards of data collection and reporting. Several ways to ensure data integrity include building steps to review the research process, carefully documenting the analysis steps, and having an external party review the process and findings.
- Calculate and summarize findings through measures such as program benefits in dollars, program costs in dollars, net benefits, and the ratio of benefits to costs. A common practice when sharing results is to include a list or description of other benefits and costs that cannot be expressed in dollars.

How To Cite This Source

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