CHAPTER 3

Tools for Identifying and Measuring Costs and Outcomes and Other Issues for Consideration

In Chapter 2, readers were introduced to different classification systems for costs and outcomes. Understanding the different classification systems for costs and outcomes can be useful for different types of analyses. For example, distinguishing between fixed and variable costs, direct and indirect costs, opportunity costs, and sunk costs are fundamental parts of the cost and management accounting methodologies discussed in Chapter 7, discussion of capital versus recurrent costs is important for proper understanding of Chapter 6, and distinctions between tangible and intangible costs and outcomes, monetary and nonmonetary costs and outcomes, and opportunity costs made throughout this book are also important in cost analyses. Being able to sort costs in different ways for different purposes can provide new insights into the merit, worth, and value of a program, enriching cost-inclusive evaluations.

Still, having multiple classification systems at one's disposal for evaluation can cause some confusion as well. Also, if categories overlap, double counting or entire omission of some critical program resources may occur. At the same time, it may be argued that if one understands that costs and outcomes can be classified under different categories, this may help to prevent double counting of costs or omissions, because knowledge provides wisdom and wisdom leads to proactive action to avoid certain pitfalls.

Under- or overestimation of either costs or outcomes can severely affect cost analyses and can have serious repercussions when decision making is based on inaccurate data and initiatives are accepted or rejected, continued or terminated, or expanded or duplicated because of misleading data. This chapter discusses tools that can help to prevent over- or underestimation of

costs and outcomes. The chapter also discusses other important issues that are pertinent to cost-inclusive evaluations.

CHALLENGES WITH GATHERING COST DATA

The biggest challenge when gathering cost data will come from your client's resistance to buy into cost-inclusive evaluation. If your client does not sanction such an evaluation, it may be virtually impossible to do even a rudimentary cost analysis. As mentioned in Chapter 1, some program administrators believe that releasing cost data may put funding at risk because a program may not measure up. However, keeping cost data concealed may be considerably riskier for programs.

Your job as an evaluator is to show your client why is it important to do a cost-inclusive evaluation and how a cost-inclusive evaluation can help to get even more funding. Accountability and transparency are critical, especially when money is at stake. One of the best ways to provide accountability and transparency is by analyzing an initiative's cost using one or more of the methodologies in this book.

This can help program administrators to understand program costs better and why it is necessary to analyze these costs. If there are strong concerns that program funding may be terminated if costs are evaluated, then it may be advisable to fast-forward to Chapter 7 to strategize how to offer a better quality service at reduced costs and serve more participants. The key to ensuring that your program is measuring up to your competitors is to thoroughly understand your program's costs and how you can use this understanding and knowledge to make your operations more efficient.

Another issue that may be of concern is the financial cost associated with cost-inclusive evaluation itself. Program administrators and evaluators may be worried that the evaluation budget is not sufficient for a cost-inclusive evaluation—that a "cost analysis" would be "too costly." Although this may seem paradoxical, it makes plenty of sense. Would not a cost-inclusive evaluation that ignored its own costs be, by some accounts, hypocritical?

The time frame for a cost-inclusive evaluation also may cause concern. Admittedly, more data collection, for example about costs as well as outcomes, and perhaps about monetary as well as nonmonetary outcomes, can mean higher costs of an evaluation itself. However, by strategizing early, comprehensive data collection, including costs and possibly monetary outcomes, can be quite doable because these data will be collected and analyzed at the same time as the usual data on program activities and nonmonetary outcomes. In addition, much cost data often can be extracted from budgets and (even better) accounting records.

The quality, credibility, and amount of cost data available also can be challenging in cost-inclusive evaluation. This may be of more concern in smaller programs, in which accounting functions are performed by nonaccountants or even volunteers. The quality of costs and benefits data available can limit the types of cost-inclusive analyses that can be performed for an evaluation. These challenges are discussed later, in the section "Why Budgets and Accounting Records Are Often Not Enough."

To be completely transparent, based on our experiences, the first cost-inclusive evaluation for a program will likely present the most challenges, especially if some stakeholders are resistant to cost-inclusive evaluation. Future cost-inclusive evaluations of the same program should be considerably smoother, as stakeholders will have had opportunities to put into place mechanisms for collecting costs and monetary outcomes data routinely. Also, after the first cost-inclusive evaluation, program administrators typically are excited to see the findings of the next evaluation.

DOUBLE COUNTING AND ITS IMPLICATIONS

Compared with monetary and nonmonetary outcomes, costs are much easier to identify and value for many evaluators. Nevertheless, identifying and valuing costs is rarely trivial for anyone and can prove to be a formidable, complicated task if one is not prepared with basic knowledge and skills. In addition to the common problem of incomplete data on costs, evaluators can easily encounter problems with *double counting* or duplication of some program costs. These two problems can have serious consequences, potentially continuing a modestly effective program for which costs have been underestimated or perhaps causing termination of a very effective program for which costs have, unfortunately, been overestimated.

Double counting of program costs is likely by both novice evaluators and even more experienced evaluators new to cost-inclusive evaluation. Duplication generally occurs when evaluators are not aware that costs can be classified differently, just as outcomes can be categorized differently. However, given that Chapter 2 discussed these classification systems, those pursuing cost-inclusive evaluations should be better prepared.

To illustrate, some programs may classify salaries under *administrative expenses,* whereas other programs may classify this expense under *salaries*. If a program has both classification systems on its books, and if accounting data were recorded by nonaccountants, data for salaries might be entered under *both* classifications! Or if an evaluator is not aware that salary data could be entered using different classification systems, salaries for this program could be underestimated, and administrative expenses could be overestimated by the exact amount. For instance, if monthly salaries of $10,000

were mistakenly entered under *administrative expenses* instead of *salaries* in a particular month and this was not detected, then *salaries* would be understated by $10,000 for the year, and *administrative expenses* would be overstated by the same amount. If budget cuts are necessary, budget cuts may be made for the wrong resources. Furthermore, salaries would then be greatly underestimated in attempts at program replication. Budget cuts may be made because of misclassification of expenses.

Costs and outcomes can also be duplicated under different guises to stakeholders. For example, the New Zealand Treasury (2005) explains that if a new railroad is built to link two towns, it would be incorrect to count the increase in home values, the decline in travel time, and better access to shopping as separate outcomes, as the latter two have already been capitalized into the increased home property values. To avoid this type of duplication problem, evaluators need to have good insight about the types of costs and outcomes that could be incurred by different initiatives (Persaud, 2007). Reviewing literature on similar initiatives can usually provide good insight into the types of costs and outcomes that should be considered.

Problems may also occur when costs are recorded as one total and not split among the different programs or services that are offered (Persaud, 2007, 2018). For example, electricity expenses for four separate programs may be entered as one total if all four programs are housed in the same building. If a cost study is then required to determine the feasibility or cost-effectiveness of, say, Program A, the evaluator may encounter difficulties in trying to isolate the electricity costs for Program A.

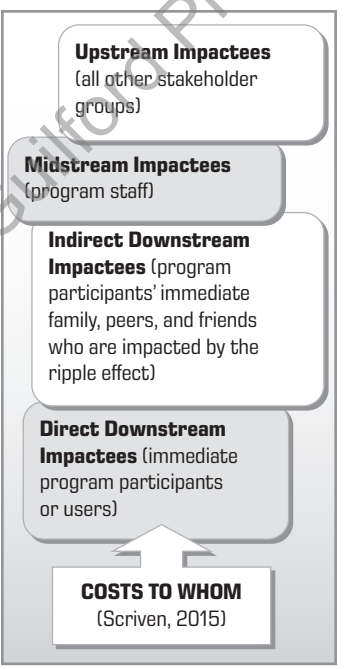
In such cases, it may be necessary to use an *apportionment* method to determine the amount of electricity that should be allocated to each program. Thus, if all programs utilized an equal amount of electricity, it could be as simple as apportioning 25% of the total electricity costs to each program. However, if one program utilized more electricity, this would obviously not be a suitable method of apportionment. Suppose all four programs were community programs aimed at curbing juvenile delinquency by encouraging the youth to learn some skill, with Program A teaching carpentry skills, Program B teaching communication skills, Program C teaching dress etiquette skills, and Program D teaching reading skills. The apportionment of electricity to these four programs would obviously not be equal. In fact, it may be appropriate to apportion between 50 and 60% of the electricity to Program A, with the remaining electricity being apportioned equally among Programs B, C, and D.

To summarize, cost-inclusive evaluators should be familiar with the different classification systems to avoid potential duplication of either costs or outcomes. They can then be more proactive and vigilant in trying to ensure that duplication or double counting does not occur.

COSTS IDENTIFICATION TOOLS

Cost studies need to be relatively precise, especially when costs and benefits are cumulative across participants of program services. Substantial over- or underestimations could result in flawed decision making, which could have serious consequences (Persaud, 2007, 2018). In cost-inclusive evaluations, the identification of all relevant costs is important. This task may appear at first glance to be rather tedious, complex, and time-consuming, especially if you are new to cost-inclusive evaluation. However, by the time you complete this book, we hope to show you that cost-inclusive evaluation is something that is quite doable. Additionally, it is fundamental to good evaluations.

As previously mentioned, costs can be classified in many ways, which could possibly result in double counting or omissions. To prevent such problems, it may be helpful to use some type of cost estimation tool. One such tool is Scriven's (1991) conceptual cost model, first illustrated by Davidson (2005) and subsequently modified by the first author, Persaud (2007). This model identifies descriptive cost data on three dimensions: (1) *type of cost,* (2) *costs to whom,* and (3) *costs when* (see Figure 3.1[1]). Note that the *costs to whom* dimension in Figure 3.1 uses terminology from Scriven's (2015) Key Evaluation Checklist (i.e., his nomenclature for impactees) and the *costs when* dimension uses a four-phase traditional project life cycle. However, if you find that a different life cycle with more phases or different labels would be more suitable, and if you



[1]In Figure 3.1, all three dimensions must be considered simultaneously. For example, ask the questions *Were monetary costs for direct downstream impactees incurred in the preparation phase? Were monetary costs for direct downstream impactees incurred in the implementation phase? Were monetary costs for direct downstream impactees incurred in the operation phase? Were monetary costs for direct downstream impactees incurred in the termination phase?* Then go to the next *costs to whom* category—*indirect downstream impactees*—and repeat the same questions linking to the *costs when* phase. Complete *monetary quantifiable,* then move to *nonmonetary quantifiable* and *nonmonetary qualitative* and repeat the same process. *Nonmonetary quantifiable* is very important when program replication is being considered. *Nonmonetary qualitative* is useful for enriching a cost-inclusive evaluation report narrative. Keep in mind that some dimensions may not be applicable in your cost-inclusive evaluation.

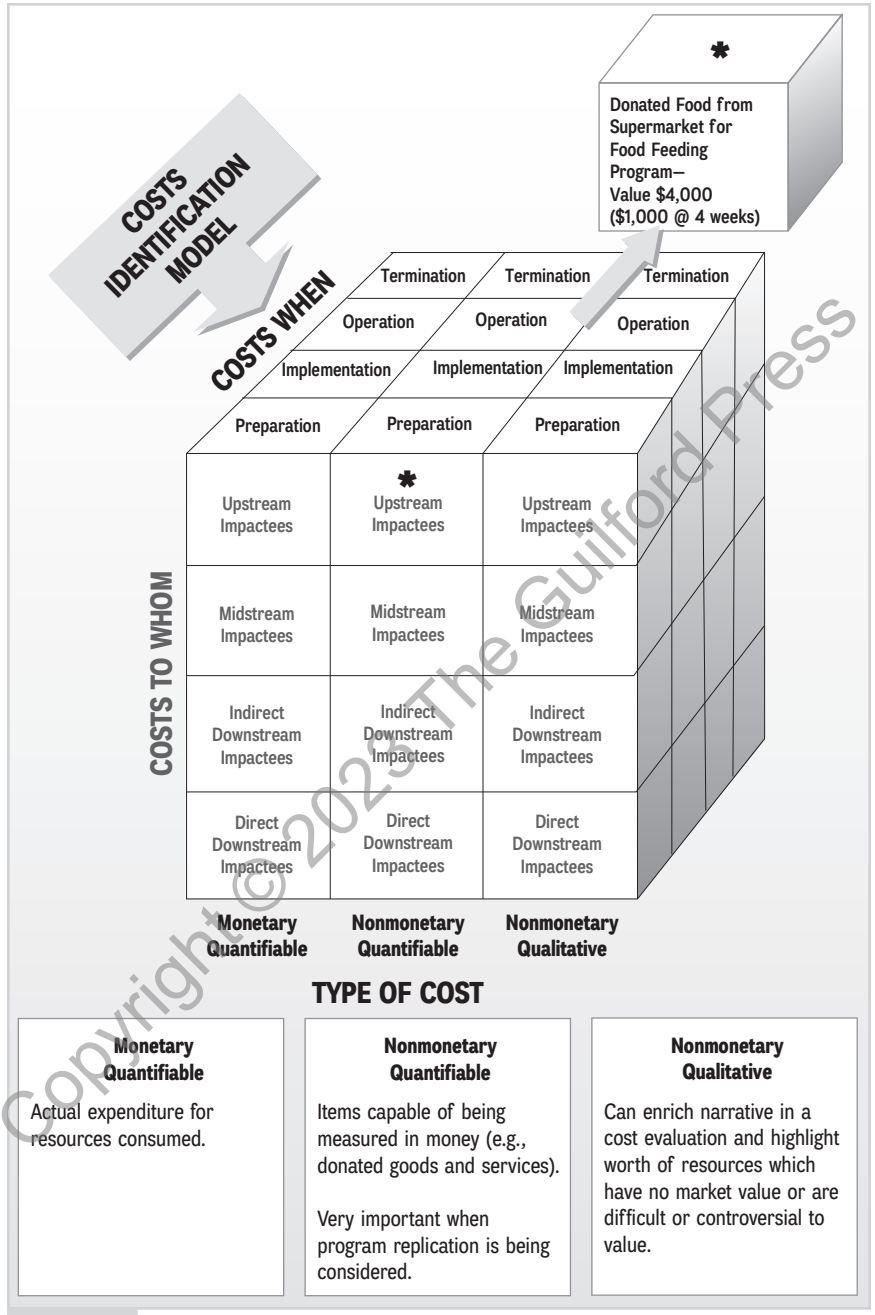


FIGURE 3.1 Costs identification model.

prefer to list your stakeholder groups directly (e.g., program staff, participants), you can do so.

The important point to keep in mind is that the classification system must make sense. Additionally, the classification should not be so ambiguous that there is potential overlap in costs, as this could result in double counting. It is also important to ensure that items are classified consistently. Three alternative formats in addition to Figure 3.1 are presented for conceptualizing program costs (see Tables 3.1, 3.2, and 3.3), as different evaluators may find it easier to understand and use a particular format.

When counting costs, exercise due care and diligence. When thinking about costs, it is important to consider many different types of costs—monetary, nonmonetary (e.g., expertise, volunteer time), opportunity costs, social capital costs (e.g., decline in workforce morale), costs that

TABLE 3.1. Alternative Format for Costs Identification: Computer School Lab Fee–Paying Program

Narrative	Monetary Quantifiable	Nonmonetary Quantifiable
Computer Hardware and Software (Itemize)		
Computers (Quantity × Price)	✓	
Donated Printers (Quantity × Price)		✓
Scanners (Quantity × Price)	✓	
Software (Quantity × Price)	✓	
Computer Network Infrastructure (Quantity × Price)	✓	
Furniture and Equipment (Itemize)		
Air Conditioning Units (Quantity × Price)	✓	
Computer Desks (Quantity × Price)	✓	
Computer Chairs (Quantity × Price)	✓	
Whiteboards (Quantity × Price)	✓	
Administrative Expenses (Itemize)		
Electricity	✓	
Instructor Salaries (Number of Instructors × Salary)	✓	
Miscellaneous (e.g., Whiteboard Markers)	✓	
Training Manuals	✓	

Note. Keep in mind the perspective and purpose of the study. For instance, donated printers would only be reflected as a cost that needs to be priced if replication is being contemplated. Otherwise, it could be discussed qualitatively in the evaluation report to enrich the narrative and highlight the value of these consumed resources.

TABLE 3.2. Simple Cost Analysis of Juvenile Rehabilitation Skills-Building Program in Carpentry

Program Costs for Year 202X	$	$
Personnel (Itemize)		
Instructional Staff	50,654	
Administrative Staff	10,432	
Maintenance Staff	4,561	**65,647**
Capital Assets (Itemize)		
Woodworking Equipment	6,633	
Other Equipment	240	
Furniture	632	**7,505**
Overheads (Itemize)		
Telephone	2,000	
Water	500	
Electricity	3,298	
Rental of Space	12,000	**17,798**
Miscellaneous Expenses (Itemize)	250	**250**
Materials and Supplies for Participants (Itemize)		
Woodworking Materials	8,500	
Supplies (Nails, etc.)	694	**9,194**
Total Costs		**100,394**
Number of Program Participants		**950**
Cost per Participant ($105.68)		**106**

occur intentionally or unintentionally, costs that occur directly or indirectly, costs incurred by different stakeholders (e.g., program participants, society at large), and costs that occur at different stages of the project cycle. Costs should be itemized using as much detail as possible (Scriven, 1991, 2015).

To avoid overlap of costs, determine at the outset which stakeholders' perspectives (see the section "Perspective for the Study" in Chapter 5) will be used to capture the types, amounts, and values of resources used by the program (i.e., costs; Persaud, 2007, 2018, 2020). These perspectives should match those being used to assess nonmonetary outcomes of

the program, that is, its *effectiveness*. For instance, if program replication is being contemplated, nonmonetary costs would need to be placed under *nonmonetary quantifiable* in Table 3.1 to accurately reflect program costs. However, if the evaluation is being conducted to satisfy funding requirements and for accountability, nonmonetary costs can be described in a qualitative manner, such as hours of time volunteered by persons with a particular expertise.

Keep in mind that costs—the resources or "ingredients" that a program uses—should be specified as precisely as possible to ensure accuracy in valuation. For example, personnel resources and corresponding costs should be split into full versus part time and relevant skill sets often reflected in academic degrees, certifications, government personnel categories, or rank—for example, doctor, nurse, therapist, graduate student, clerical, administrative. The most effort in categorizing and determining the monetary value of different resources should be in proportion to the overall contribution of the resource to total program costs (Persaud, 2007, 2018) and outcomes. In other words, invest more time in the cost categories that consume the largest share of the entity's budget and seem most likely to determine its outcomes.

For instance, in many programs, it is personnel costs that require the most attention and differentiation for accurate costing and/or replication. Specifically, remuneration is the largest budget category in most educational institutions (e.g., University of Arizona). Therefore, evaluators should devote more time to ensuring that salaries are accurate and that the monetary value of health care and other benefits are included, rather

TABLE 3.3. Alternative Format for Costs Identification: Service-Related Activities

Service-Related Activities (Participant Name)	Jan	Feb	Mar	Time Period *n*	Total
Direct Services					
Activity 1					
Activity 2					
Activity 3					
Activity 4					
Activity 5					
Activity 6					
Activity *n*					

than spending substantial time in trying to categorize and cost out office supplies in detail. "People—not paper clips" might be the motto here for focusing efforts in cost-inclusive evaluation.

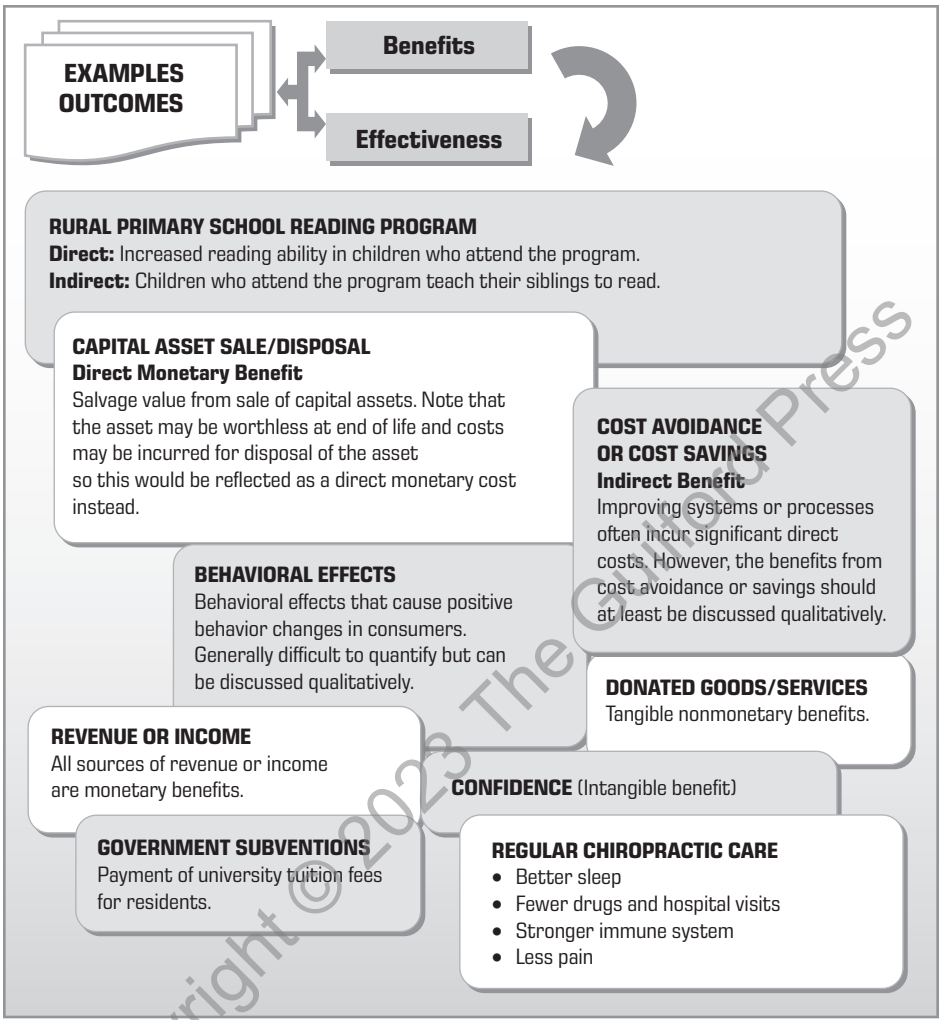
This practice also can maximize the accuracy of cost-inclusive evaluations. Office supplies generally represent less than 1% of program budgets. A 100% overestimation error in office supplies of $3,000 would be comparatively negligible, only overstating total costs by $3,000, but a 15% overestimation error in salaries and benefits totaling $1,000,000 would overstate total costs by $1,000,000 × 15% = $150,000.

OUTCOMES IDENTIFICATION TOOLS

Cost-inclusive evaluations should attempt to identify all program outcomes derived, if possible and feasible. However, like costs, it is quite easy to duplicate or omit outcomes. In addition, just as monetary and nonmonetary resources can be distinguished, so can monetary and nonmonetary outcomes. Substance abuse treatment and other programs that reduce use of health or criminal justice services can be evaluated not only by counting the number of each type of service reduced but also in terms of the savings from health service costs avoided. Similarly, mental health programs that return participants to employment, increase the number of days worked, or increase the income earned can be evaluated not only by the additional days of work generated but also by the additional salary and benefits accrued. Due care and diligence need to be exercised when identifying and valuing program outcomes, as decision making based on misleading data can have serious consequences, especially when over- or underestimations are large (Persaud, 2007, 2018).

Figure 3.2 presents an outcomes identification model developed by the first author (Persaud), which can aid with the identification of relevant monetary outcomes (i.e., benefits) or nonmonetary outcomes (i.e., effectiveness) for your cost-inclusive evaluation. The outcomes identification model is quite similar to the costs identification model shown in Figure 3.1 in that it uses the same three dimensions. However, the labels for the *when* dimension in Figure 3.2 reflect the timing of the outcomes rather than the program life cycle used in Figure 3.1.

An alternative approach would be to use a table format instead (see Tables 3.4 and 3.5). Some evaluators may find this format easier to navigate. Regardless of the approach used, exercise care to ensure that all outcomes are properly captured for your cost-inclusive evaluation. If too expensive or difficult to quantify, discuss in the evaluation report, using qualitative narrative instead.



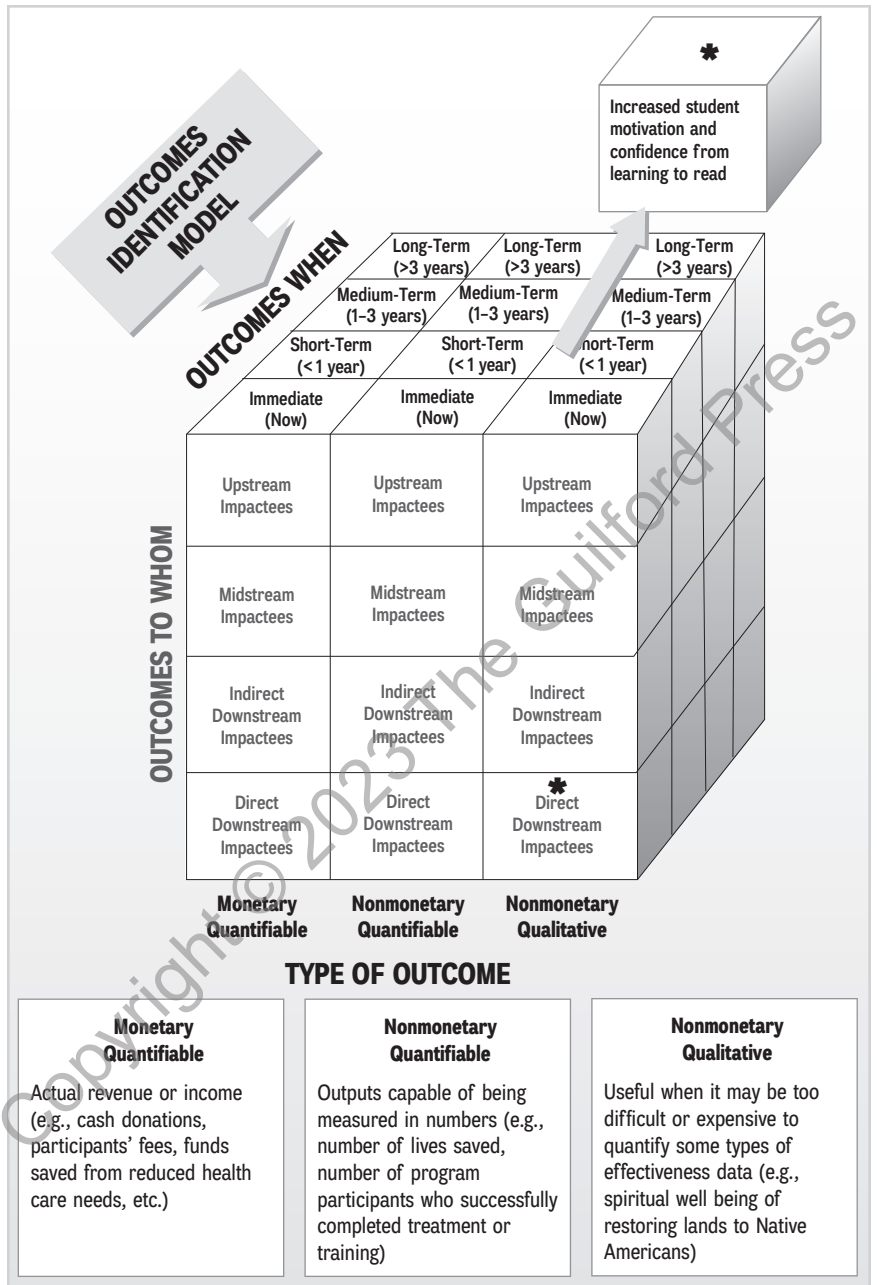


FIGURE 3.2 Outcomes identification model.

TABLE 3.4. Alternative Format for Outcomes Identification

Type of Outcome	Outcomes to Whom	Outcomes When	Narrative for Itemization
MONETARY QUANTIFIABLE	Direct Downstream Impactees	Immediate Medium Term Short Term Long Term	Provide detailed itemization in money for each impactee group linking to each *Outcomes When* criterion, i.e., follow similar process to that explained in footnote 1 on p. 51.
	Indirect Downstream Impactees	Immediate Medium Term Short Term Long Term	
	Midstream Impactees	Immediate Medium Term Short Term Long Term	
	Upstream Impactees	Immediate Medium Term Short Term Long Term	
NONMONETARY QUANTIFIABLE	Direct Downstream Impactees	Immediate Medium Term Short Term Long Term	Items capable of being measured in numbers (i.e., effectiveness). Examine the effort and cost to do this versus just reporting qualitatively.
	Indirect Downstream Impactees	Immediate Medium Term Short Term Long Term	
	Midstream Impactees	Immediate Medium Term Short Term Long Term	
	Upstream Impactees	Immediate Medium Term Short Term Long Term	
NONMONETARY QUALITATIVE	Direct Downstream Impactees	Immediate Medium Term Short Term Long Term	This can enrich cost-inclusive evaluations. Useful when it is too difficult or costly to quantify certain types of outcomes.
	Indirect Downstream Impactees	Immediate Medium Term Short Term Long Term	
	Midstream Impactees	Immediate Medium Term Short Term Long Term	
	Upstream Impactees	Immediate Medium Term Short Term Long Term	

Note. Outcomes are program specific. Your specific program may not have outcomes for all impactees in each of the three dimensions.

TABLE 3.5. Alternative Format for Outcomes Identification: Computer School Lab Fee—Paying Program

Narrative	Monetary Quantifiable	Nonmonetary Quantifiable	Nonmonetary Qualitative
Benefits (Money)			
Classes: Community Children (Participants × Fee)	✓		
Classes: Community Adults (Participants × Fee)	✓		
Salvage Value: Sale of Capital Assets	✓		
Effectiveness (Numbers)			
Number of Children Who Completed Program		✓	
Number of Adults Who Completed Program		✓	
Effectiveness (Qualitative Description Only)			
Increased Confidence from Being Computer Literate			✓

Note. Keep in mind the perspective and purpose of the study.

Note that if the computer lab is to be used exclusively for the children who attend the school, then revenue generation from outside classes would not be applicable, and effectiveness data would be the school-children.

If instead computer classes are being offered to outside participants, the revenue earned would reflect the time period for which the program is being evaluated. Thus, if the program's life is 5 years and the program is being evaluated at the end of the period, the revenue earned would be for the 5-year period. However, if the program was being evaluated at the end of Year 1, the revenue would reflect only revenue earned in Year 1. Likewise, resources consumed would reflect only Year 1 costs.

Also, if the program is being evaluated in Year 1, salvage value of a capital asset would not be applicable, as assets are salvaged at the end of their useful lives.

If actual cash inflows are received, several of the economic appraisal methods discussed in Chapter 4 could be used to evaluate this program. However, if no cash inflows are received, only a simple cost-effectiveness analysis of this program would be possible. For instance, if the program is being evaluated at the end of the 5-year period and only children used the program, divide total monetary costs in Table 3.1 by total students who used the lab.

MACRO-, MESO-, AND MICRO-LEVEL PROGRAM OPERATION AND EVALUATION

As defined by Wholey, Hatry, and Newcomer (2010), "*a program is a set of resources and activities directed toward one or more common goals*" (p. 5). In addition, however, different programs operate at different levels of specificity. Individual therapy with one person could be considered a "program," for example, but a rather specific, *micro*-level program; most, if not all, activities of therapy focus on one individual, the *participant*. Other programs are far more *macro* in that they are regional, national, or inter-

national in scope, in the focus and conduct of activities, and in outcomes desired. Examples of macro-level programs include most efforts to reduce air pollution, improve water quality, or control an epidemic. Between micro programs and macro programs lie most of the programs we evaluate. At this in-between or *meso* level, there might be initiatives, for instance, that target an important set of health problems, such as cardiovascular disease, and for persons in a particular community. At macro, meso, and micro levels, there are substance abuse prevention programs, education efforts, and criminal justice programs for disadvantaged youth.

The concept of a continuum from more to less specific program activities can be expanded to help plan, solicit, and describe findings of evaluations, especially when evaluating costs as well as outcomes. For example, costs and outcomes of providing social services to children and families can be measured for a citywide program (*meso-level* cost assessment, most likely), for each individual child in the city (*micro-level* cost assessment, certainly), or for an entire country (*macro level,* for sure).

Some evaluators may attempt very simple cost measurement by simply dividing total costs by the number of participants served. The same can be done for some program-level outcomes, such as the number or percentage of students graduated or patients "cured." These macro-level-only approaches to evaluation minimize opportunities for more sophisticated statistical analyses, as explained in later chapters, and for more formative, improvement-oriented evaluation (Scriven, 1967).

Evaluating costs and outcomes not just at the program level (total costs, total outcomes) but also at individual and group levels allows understanding of the variability in costs and in outcomes between individuals. Evaluating costs and outcomes at group as well as individual levels allows costs and outcomes of serving different types of participants—older compared with young, Black compared with White, women compared with men, for example—to be measured separately. This can help answer questions about possible differences in costs, as well as possible differences in effectiveness and benefits for different groupings of participants. Finding differences in costs and outcomes for different types of participants can generate concern and heated discussion about inequities but also can help resolve those inequities. How otherwise can a program reduce or eliminate differences in outcomes or costs if they have not been evaluated—for example, measured before, during, and after efforts to resolve those inequities?

Also, although a program can operate on a national or global level, its evaluation can be conducted at more specific levels. Meso- or even micro-level evaluation of a macro-level program is possible, for example, and can be preferable. Treating or draining ponds in a specific forest, for instance, are micro-level interventions for eliminating Guinea worm transmission, along with provision of safe drinking water and education about symptoms

and treatment (see Carter Center, n.d.). This program can be thought of as being implemented with *macro* goals (e.g., improved national health and productivity, freeing up of health care resources) and *macro* activities (e.g., funding of a collaborating center, implementation in all countries infested by the nematode). *Meso* activities are funded for specific regions of different countries, and the success of those activities would be evaluated for different regions. Changes in behavior and occurrence of infection despite program activities would occur at the *micro* level of individual water sources and individual human hosts. Evaluation of outcomes and of costs will likely occur at multiple, and perhaps all, levels, given that resources are used for eradication program activities at each level and that outcomes occur at multiple levels as well.

WHY BUDGETS AND ACCOUNTING RECORDS ARE OFTEN NOT ENOUGH

Budgets and accounting records summarize monetary units of measurement (i.e., inflows and outflows of money). They thus provide a good starting point for extracting costs and possibly monetary outcomes (benefits) data for some types of after-the-fact (*ex-post*) cost studies (Persaud, 2007, 2018, 2020). However, budgets and accounting records may not capture information on many types of resources consumed by a program, for example, volunteered time and donated resources, such as free or public facilities (Persaud, 2021). Understanding the types and amounts of such resources is important when program replication is being contemplated.

In other cases, accounting records generally will not provide information about revenue generated by participants if that is not the focus of the program. For example, a mental health service that provided participants with assertiveness training, which then empowered them to reinvoice their customers for work completed but for which payment was never obtained, is not captured in accounting records. Budgets and accounting records also do not record sunk costs, opportunity costs, and other intangible costs. Important intangible outcomes of programs, such as increased confidence and enhanced self-esteem, are therefore not recorded.

In cost-inclusive evaluations, data for estimated costs and outcomes need to be relevant to the program under consideration. Thus it would be inappropriate to assume that costs and monetary outcomes from a particular program would be the same for another program unless the program is identical in all respects. If this is done, serious over- or undercounting of costs and benefits can result (Mohr, 1995; New Zealand Treasury, 2005).

Finally, the validity of budgets and accounting records should not be assumed inviolable. Both can contain errors of transposition or misclas-

sification, missing or incomplete data, inconsistencies, and lump sums that make it difficult to assign costs to specific activities of a program (Persaud, in press). For example, if electricity is recorded in the accounting records as $100,000 for Year 202X and five separate programs are being administered, it would likely be helpful to the evaluation to understand how much electricity was or would be consumed by each program.

ETHICS AND COST-INCLUSIVE EVALUATION

In conducting evaluations, evaluators are likely to encounter many ethical and moral challenges and dilemmas (Persaud & Dagher, 2020). These challenges are inevitable (Buchanan & MacDonald, 2012; Morris, 2015; Persaud, 2021; Royce, Thyer, Padgett, & Logan, 2001) and will likely be considerably exacerbated in cost-inclusive evaluation. We have seen those who care deeply about collecting, analyzing, and reporting data on outcomes of programs pivot all too pragmatically when costs of programs are evaluated. We also have experienced notable prejudice against reporting program *net benefits* (benefits minus costs) that were negative, that is, when costs exceeded benefits. Irrespective of the type of evaluation, evaluators should anticipate and plan to deal with all types of challenges, so that their work can be seen as credible (Fitzpatrick, Sanders, & Worthen, 2004; House, 1993).

According to Morris (2005), the domain of ethics is concerned with "issues of moral duty and obligation, involving actions that are subject to being judged as good or bad, right or wrong" (p. 131). Yet ethics can be rather nebulous (Kant, 2018), and standards can be interpreted quite differently by different individuals. In fact, moral issues can become obscured by economic, professional, and social pressures. Rules of ethics that should govern "behavior and attitudes based on the doctrine of prima facie equal rights" (Scriven, 1991, p. 134) may often be conveniently ignored.

In cost-inclusive evaluations, the determination of "right" and "wrong" can be more complex than expressing a strong belief in conducting ethical evaluations, regardless of type. Our experience shows us that cost-inclusive evaluations require considerable judgment and sensitivity when using com-

plex, sometimes ambiguous, and often incomplete data. Ethics in cost-inclusive evaluation goes far beyond ensuring due diligence and care in collecting data on costs and outcomes. It encompasses not succumbing to political pressures to juggle figures in the interest of the program, consumer advocate, or funder. It requires using sound professional judgment to determine which costs and outcomes to include and how to value costs and outcomes (Persaud, 2007). For instance, concerns have been raised on the fairness of valuing disenfranchised groups equally alongside other groups. Questions have been raised on the ethics of trying to assign a value to a human life. An even more contentious discussion arises when life is valued using demographics based on age, economic status, or gender.

As alluded to, the evaluator's responsibility for providing accurate and comprehensive data is important to facilitate decision making that is rational and sound. Still, ethical controversies can occur even when the data are accurate. For instance, although a cost-effectiveness analysis can aid choices among competing programs with similar objectives, it is a considerably more complex task to make decisions when competing programs have widely disparate objectives. In the latter case, concerns with equity and fairness may often surface, especially when all competing needs are equally worthwhile and the constituencies they benefit are equally important (Linfield & Posavac, 2019; Pinkerton, Masotti-Johnson, Derse, & Layde, 2002).

In other instances, criticism may be leveled against cost-inclusive evaluation because some stakeholders fear it. This fear may be expressed as beliefs that allowing costs, monetary outcomes, or net worth to figure into an evaluation of human service programs is unethical, impractical, or immoral. For instance, some clinicians involved in mental health care "resist the idea that clinical decisions should be guided by economic considerations instead of the needs of the patient" (Berghmans, Berg, van den Burg, & ter Meulen, 2004, p. 146). However, another position is that it may be unsound, as well as unethical, to ignore the just distribution of scarce resources, as the pursuit of one initiative over another carries an opportunity cost (Williams, 1992). Moreover, there are indeed many alternatives that can be equally effective at doing the same thing for much less cost, and thus economic considerations must be taken into account. Additionally, it could be argued that if it is unethical to take costs into consideration, then we would never be challenged or motivated to find better and cheaper ways to do things. Indeed, we have argued that by funding programs that require fewer resources per participant served effectively—by "delivering the best to the most for the least" (Yates, 1996, p. 2)—a greater number of consumers can participate in programs and experience positive outcomes.

Cost-inclusive evaluators have a moral obligation to do their work well in compliance with high ethical standards to ensure that scarce resources

are optimized for societal good, just as all evaluators do. Yet consequences of doing our job well can involve challenging the status quo and political dynamics that could lead to retribution (Smith, 2002). Still, it is crucial to recognize that ignoring the moral consequences of ignoring costs or exaggerating outcomes can do great harm and contribute significantly to injustice. Cost-inclusive evaluators, therefore, have important roles to play in ensuring justice and equity for all.

COMMON TRAPS AND PITFALLS

If you are reading this book, it is because you are motivated to learn more about cost-inclusive evaluation. However, to get a good overview of the many issues that you need to consider in cost-inclusive evaluation, you need to read the book in its entirety. Nevertheless, this section highlights a few issues that you should keep in mind to ensure that your cost-inclusive evaluation is credible and useful, as a cost-inclusive evaluation that is neither will not be used. Evaluations require considerable time and effort, which carries a cost. Therefore, our goal must be always to produce an evaluation report that is helpful and useful for informed decision making.

- Many clients may be uneasy when you suggest a cost-inclusive evaluation. Make sufficient time to properly articulate why this type of evaluation is better and use examples to illustrate how cost-inclusive evaluation can help your client.

- Involving a variety of stakeholders in an evaluation from the beginning can be even more essential for cost-inclusive evaluations than for other evaluations. Providers, participants, advocates, managers, funders, and regulators all care deeply about the resources *they* devote to a program. These and other stakeholders often have unique and important information about the resources needed for and used by programs to "make it work," as well as the value of those resources. Just as neglecting any stakeholder group when evaluating program activities or outcomes can be a serious mistake in any evaluation, ignoring their perspectives on the types, amounts, and monetary values of resources used by the program could invalidate or sabotage a cost-inclusive evaluation (see Chapter 5; cf. Yates, 2012).

- Keep in mind your time frame and evaluation budget, as both have implications for the type of study that is realistically feasible and practicable.

- Cash inflows and outflows must be discounted to take account of the time value of money when economic appraisal methods are being used

(see the section "Time Preference and Discounting" in Chapter 4). This is particularly critical when initiatives have a life of more than a year. Not discounting your cash flows can considerably distort the value of your cash flows.

■ The discount rate selected is important, as discount rates can have a huge impact on your cash flows (see the section "Discount Rate Choices and Their Impact on Analyses" in Chapter 5). This rate must be carefully chosen, and a justification must be provided for its choice.

■ Ensure that you understand the pros and cons of the various economic appraisal methodologies that can be used in a cost-inclusive evaluation (see the section "Advantages and Disadvantages of Different Economic Appraisal Methods" in Chapter 4). Also ensure that the methodology selected is suited to the needs of decision making.

■ Be open to the use of methodologies from cost and management accounting (see Chapter 7).

■ Ascertain the type and quality of data that are available, as this will determine the methodology that can be used, as well as the sophistication of the analyses.

■ Review the literature on similar programs to see what types of costs and outcomes were included in the analysis. You may need to make comparisons to other studies in your report.

■ Avoid methodologies that are "trendy" but not sound. Ask yourself if it is the correct methodology for your particular cost-inclusive evaluation.

■ Always try to use both quantitative and qualitative analyses in cost-inclusive evaluation. Qualitative analyses are often ignored but can really enrich the discussion.

■ A cost-inclusive evaluation should ideally consider critical competing programs and alternative interventions that could achieve the same or similar results. Scriven (2015) recommends looking at a more expensive option, a less expensive option, and an option with similar costs.

■ Always document the assumptions made in an evaluation, so that readers can understand and independently replicate your computations. Also, note that if comparisons are being made with other critical competitors, then the assumptions used must be similar to those of your critical competitors.

■ Avoid controversial valuations that can discredit your report. For example, valuations placed on life can be exceedingly controversial. It may

be better to use a methodology such as cost-effectiveness analysis to avoid this problem.

- Keep in mind when you are considering replication that cash inflows and outflows may need to be adjusted for inflation.

SUMMARY

Overestimating or underestimating costs or outcomes can produce flawed cost analyses, leading to incorrect guidance for administrative actions. Double counting or complete omissions of either costs or outcomes can similarly produce inaccurate evaluation findings. If costs are underestimated, a program that is only modestly effective could continue to be funded. Worse yet, if costs are overestimated, funding for a beneficial program could be terminated.

Chapter 3 also highlights the importance of understanding the many classification systems (discussed in Chapter 2) that can be used for monetary costs and benefits. Understanding nuances of different cost and benefit classifications can prevent over- or underestimation, double counting, and complete omissions of critical costs and benefits. Two tools can identify and measure costs and outcomes to avoid the aforementioned problems: (1) the costs identification model and (2) the outcomes identification model. Both models classify costs and outcomes on three dimensions: (1) *type* (monetary quantifiable, nonmonetary quantifiable, nonmonetary qualitative), (2) *whom* (the various program stakeholders), and (3) *when* (time period). Variants of these models were also presented using a table format for easy understanding and navigation.

The importance of considering nonmonetary quantifiable and nonmonetary qualitative costs and outcomes of programs is emphasized, as such discussions enrich evaluation reports and address interests of many persons served or otherwise affected by the program. This chapter also highlights challenges with collecting cost data, including client resistance. The chapter explains why budgets and accounting records often are insufficient to tell the true story of program resources, activities, processes, and outcomes. Different levels of specificity (macro, meso, micro) in costs and outcomes often need to be considered for comprehensive cost-inclusive evaluations. Ethical dilemmas that can occur when conducting cost-inclusive evaluations are explored in Chapter 3 as well. Good judgment and sensitivity to cultural concerns are requisites for effective cost-inclusive evaluation. The chapter ends by exploring common traps in cost-inclusive evaluation, providing advice on how to avoid these pitfalls.

DISCUSSION QUESTIONS

(1) Over- and underestimation of costs and outcomes can lead to flawed cost analyses. To understand this concept, answer the following questions:

- **(a)** Assume that your correct program costs are $100,000 and participants equal 100. Calculate the cost per participant.
- **(b)** Assume that you have overestimated program costs by $20,000. Calculate the cost per participant.
- **(c)** Assume that you have underestimated program costs by $10,000. Calculate the cost per participant.
- **(d)** Discuss how over- and underestimations can affect decision making.

(2) You have embarked on a community initiative in which you will be giving out protective COVID-19 equipment to residents of your neighborhood. Working in pairs, identify the various types of costs that would be incurred in this initiative. Now compare your responses. Discuss as a class whether your costs are realistic. Present your information using Table 3.1 as a guide.

(3) This chapter highlighted that costs and outcomes can be classified as nonmonetary and quantifiable and as nonmonetary and qualitative. Think of a program and identify two costs and two outcomes that may be classified as nonmonetary quantifiable and nonmonetary qualitative. Discuss the value-added that can be derived from presenting this information as part of your cost-inclusive evaluation report.

(4) In groups of four, discuss four ethical issues that could arise with cost-inclusive evaluation. How would you address these concerns so that your cost-inclusive evaluation is not criticized?

Guilford Publications
370 Seventh Avenue
New York, NY 10001
212-431-9800
800-365-7006
www.guilford.com