



## **SETTING COST EFFECTIVENESS IN CONTEXT**





<b>SETTING COST-EFFECTIVENESS IN CONTEXT</b>	<b>3</b>
<b>Evaluation</b>	<b>4</b>
<b>Reviews of evidence of what works</b>	<b>4</b>
<b>Cost-effectiveness</b>	<b>5</b>
<b>Limitations</b>	<b>6</b>





## Setting cost-effectiveness in context

Assessing the cost-effectiveness of a policy intervention involves comparing its costs and the value of its outcomes relative to some alternative policy (which might include doing nothing). An assessment of cost-effectiveness can assure taxpayers and policy-makers that the intervention provides good value for money, or it may signal that there is a less costly way to achieve the desired outcomes, or suggest that resources would be better devoted to achieving some other objectives.

Before describing some approaches to assessing cost-effectiveness, it is helpful to step back and consider its context and how it fits into the broader framework of the evaluation of social policy interventions and programmes.

The primary aim of social policy interventions is to achieve some desired outcomes that could not be achieved otherwise. The key questions to be asked are:

- What are the desired outcomes?
- Can these outcomes be achieved without government intervention?
- What feasible policy intervention might achieve these outcomes?
- Will it work, or has it worked?
- If it works, will it be worth the costs of implementation? Or, has it been worthwhile?
- If not, are there improvements to be made or other outcomes that might be worth achieving?

Question 1 – the selection of desired social outcomes – is a matter for political and public debate. Questions 2 and 3 constitute the appraisal stage and entail theory-building and setting out the logic of an intervention. Question 4 is in the domain of evaluation, while question 5 encompasses efficiency and cost-effectiveness. Finally, question 6 involves evaluation of value for money and trade-offs among competing policy objectives, and may return the decision-maker to the issue of selecting goals in question 1, where the sequence of steps may resume. The process is illustrated in Chart 1.

For the purposes of this review the focus is on questions 4 and 5, since the measurement of cost-effectiveness (5) presupposes that an intervention works (4).





## Evaluation

Different types of evaluation address different aspects of an intervention, as illustrated in Chart 2. A **process evaluation** can be thought of as dealing with the links between the inputs and outputs of the intervention. An **outcome evaluation**, on the other hand, is concerned with the link from the delivered output of the intervention to its eventual outcomes (often the result of a change in the behaviour of those experiencing the intervention), and looks at whether it has produced the desired outcome. Also shown in Chart 2 is the role of cost-effectiveness analysis in associating the outcomes with the resource costs of providing the intervention (the inputs). Both process evaluations and outcome evaluations are relevant for the assessment of cost-effectiveness. A high cost incurred to achieve an outcome may have its roots either in a costly or inefficient process for delivering the intervention, or in a weak link between the intervention and the desired outcomes (an ineffective intervention). It is helpful to know which of these factors is the main driver of poor cost-effectiveness, as this will help determine what steps should be considered to improve it.

## Reviews of evidence of what works

Question 4 ('will it work?' Or 'has it worked?') is especially important as it requires evidence of a causal link between the intervention and the outcomes sought, which, in the case of early-childhood interventions, may be several years later. Furthermore, policy-makers should be concerned to know the whole range of results from the policy, positive and negative, intended and unintended, as they need to be factored into answering questions 5 and 6.

For this reason, evidence from outcome and impact evaluations of similar interventions tried elsewhere is desirable.<sup>1</sup> One of the best sources of this type of information is the publications of the Campbell Collaboration, which coordinates a number of systematic reviews of social interventions, effectively meta-analyses of the evidence on average effect sizes from formal evaluations of a large number of similar interventions, drawing on both published and unpublished research using experimental or quasi-experimental methods.<sup>2</sup> This The rigorous and systematic methodology followed means that the authors' conclusions about the balance of evidence on whether a certain type of intervention works or does not work, and the quality of the evaluation methodologies, carry a good deal of weight.

Examples of the types of interventions that have been systematically reviewed as part of the Campbell Collaboration are:

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<sup>1</sup> Impact evaluations focus on the broad, longer-term effects of a programme or intervention and are usually done some time after the programme or intervention has been completed. They complement an outcome evaluation, which focuses on the change brought about by an intervention, particularly with respect to the effects on the intended beneficiaries.

<sup>2</sup> The Campbell Collaboration's library of published systematic reviews can be accessed through [www.campbellcollaboration.org](http://www.campbellcollaboration.org). A similar initiative is the Cochrane collaboration, which coordinates systematic reviews of evidence in the medical and public health fields.





- The effects of early family or parent-training programmes aimed at reducing children's behaviour problems (55 studies)
- The effects of parents' involvement in intervention programmes to improve children's academic performance (18 studies)
- The effects of direct provision of additional monies to poor families for children's health, well-being and educational attainment (nine trials including more than 25,000 participants)
- The effects of group-based parenting programmes on the emotional and behavioural adjustment of children aged under three years (five studies)
- The effects of early self-control improvement programmes on reducing delinquency and problem behaviour (34 studies)
- The effects of parent-training programmes on maternal health (26 studies, covering five different theoretical approaches)
- The effects of individual and group-based parenting programmes for teenage parents on a range of maternal and infant outcomes (four studies).

It should be noted that not all these interventions were judged to show clearly positive effects.

### **Cost-effectiveness**

This review of the cost-effectiveness of early interventions to improve outcomes for children and their families is essentially a summary of attempts that have been made to address question 5 – 'have the outcomes been worth the cost of implementing and running this intervention?' – across a wide range of settings, including different answers to questions 1 to 4. Many of the estimates of cost-effectiveness are not directly comparable, not just because of different methodological approaches, but also because of this diversity in background and context. In this situation, it is probably more useful to group together the results of similar objectives and interventions and draw some conclusions about their cost-effectiveness using a common approach, than to try to compare the cost-effectiveness of interventions aimed at achieving different outcomes, where researchers may have used different measures of cost-effectiveness. Approaches to assessing cost-effectiveness can vary according to the scope of what costs and benefits are counted, the methods adopted for dealing with costs or outcomes that are inherently difficult to value, and the way the decision criteria are framed. The following table illustrates this point.





<b>Approach</b>	<b>Valuation of intervention inputs</b>	<b>Measurement or valuation of outcomes</b>	<b>Decision criterion</b>
Cost-benefit analysis	Conventional economic valuations (\$)	Conventional economic valuations (\$)	Positive net present value of benefits less costs
Social Return on Investment (SROI)	As above, but supplemented by attempts to value social costs (\$)	As above, but supplemented by attempts to value social benefits (\$)	Percentage by which total benefits exceed the costs of investment
Cost-utility analysis (Health sector)	Conventional economic valuations (\$)	Some measure of utility, such as reported satisfaction or quality-adjusted life-years (QALY)	QALYs achieved in relation to \$ spent.
Incremental cost-effectiveness ratio (ICER)	Conventional economic valuations (\$)	Description of difference in outcomes resulting from the intervention	How much people report they would be willing to pay (WTP) to achieve result, compared with actual cost.
Pay-back	Conventional economic valuations (\$)	Predicted value of outcomes at different scales of operation	Number of positive outcomes that would be needed to cover costs
Remedial or avoided costs	Conventional economic valuations (\$)	(i) Description of outcome (ii) Economic and social costs of outcomes through not intervening	Compare fiscal costs of achieving (i) vs fiscal consequences of (ii).

### **Limitations**

The potential usefulness of cost-effectiveness evaluation is limited by the inherent complexity of interventions that deal with human behaviour. Complexity arises from considerations such as:

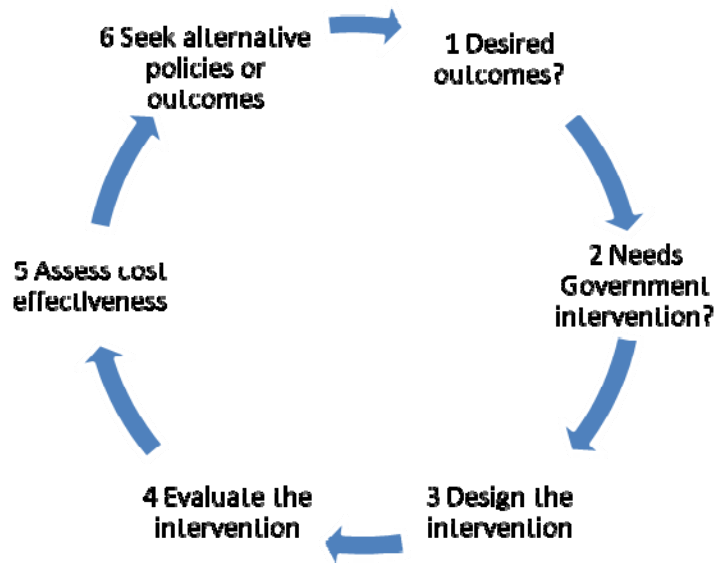
- The fact that children and families can exhibit a wide range of problems and can respond in different ways to a particular intervention; thus the average change resulting from an intervention can mask a wide variation in gains
- The difference between short-term and long-term benefits from an intervention
- The difficulty in measuring some of the costs and benefits
- Ethical issues that arise when trying to conduct a randomized control experiment in a social policy area





- The political and governance environment, in which scientifically based information on how well interventions work or do not work can threaten particular policy commitments or agendas.

**Chart 1: Selecting and evaluating a policy intervention**



**Chart 2: Evaluations and cost-effectiveness analysis**

