



ECONOMIC APPRAISALS

Our thoughts on how economic appraisals can help answer the question - is this aid project a good return on investment?



Introduction

In a world of limited resources and persistent global challenges, maximising the impact of development aid with a good return on investment is important. The problem, however, is finding a systematic way to assess the return on investment across programmes in different contexts and countries. Economic appraisals are being used to assess the return on investment, but how to conduct such assessments can present moral and practical considerations to development organizations, funders and practitioners.

This guide is a good starting point for anyone involved in project development and management who is looking to understand the components of economic appraisals. It draws on our experience at LAMP of conducting economic appraisals of health and education programmes in low and middle income countries and offers a practical step-by-step guide to the appraisal process. In addition, insights from relevant literature informed our recommendations.

It is divided into three sections. The first section gives a brief overview of economic appraisals. The second section walks the reader through the process of conducting an economic appraisal. The third section describes the challenges that can be encountered while conducting an economic appraisal followed by some recommendations.

SECTION 1: Overview of economic appraisal

What are ‘Economic Appraisals’?

In international development, organisations face some tough decisions: which programme or intervention will achieve the best results and at what costs. Economic appraisals in development projects attempt to identify, measure and compare the costs and outcomes of alternative interventions in a systematic way.

As such, ‘economic appraisal’ refers to the tools and processes that are used to assess the benefits and costs of different interventions to find the one with the best value for money.¹

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When are economic appraisals done: before or after a project has started?

Used interchangeably, economic appraisals and evaluations are the same. They can be conducted at any time during a project’s life cycle but the timing depends on the needs of the decision makers.² They can ‘look forward’ and forecast the potential impacts and costs of a programme or ‘look back’ and reflect on the project as it has been implemented. Findings from an appraisal can help to inform decisions about the purpose, scope and features of a project. This is most effective when used together with other information such as strategic and political considerations.

Economic appraisals can ‘look forward’ and forecast potential impacts or ‘look back’ and reflect on the project’s implementation.

1) Drummond, M. F., Sculpher, M. J., Claxton, K., Stoddart, G. L., & Torrance, G. W. (2015). *Methods for the economic evaluation of health care programmes*. Oxford University Press. https://books.google.co.uk/books?hl=en&lr=&id=yZSCwAAQBAJ&oi=fnd&pg=PP1&dq=Drummond,+M.F.+2005.+Methods+for+the+economic+evaluation+of+health+care+programmes.+Oxford:+Oxford+University+Press&ots=_9VemD3pCN&sig=WRZ5FmN5Ft7dj-2DH1Cyi0JTncXk#v=onepage&q&f=false

2) Aniza I, Hossein M, Otgonbayar R., Munkhtuul Y. (2008), Importance of economic evaluation in healthcare decision making, *Journal of Community Health*, 14 (1), pg 1-10

Why conduct economic appraisals?

Appraisals may be conducted for several reasons. It depends on the stage of the programme and the question that is being investigated:³

Allocation: Comparing the costs and benefits of different interventions helps funders allocate resources to their most effective and efficient use during program design and implementation phases.

Accountability: Appraisals are an important tool for holding development organisations to account. This can be viewed either from the bottom up, from the perspective of beneficiaries whose lives are affected by the impact of a programme; or from the top down, by funders who want to know how their money is being spent.

Advocacy: Appraisals produce findings in terms of cost estimates and statistics which are important for advocating for more resources at the beginning of a programme or the scale-up of a programme at the end of implementation.

Adaptation and Learning: Appraisals open up organisations to scrutiny, enabling proper understanding of where operations are smooth and where improvements can be made. They contribute to a learning process that helps organisations be more adaptive, dynamic and responsive to change during implementation and contribute to the body of knowledge for future programmes.

Stage of programme implementation	Reasons for conducting an economic appraisal			
	Allocation	Accountability	Advocacy	Adaptation and learning
Programme design	✓✓✓	✓✓	✓✓✓	
During Implementation	✓✓✓	✓✓	✓	✓✓✓
End of programme*		✓✓✓	✓/✓✓✓*	✓✓✓

Table 1: Reasons for conducting an economic appraisal

* Making the case for the use of economic appraisal for advocacy purposes at the end of a programme will only be necessary when there is consideration for scale-up or extension.

3) Guthrie, S., Wamae, W., Diepeveen, S., Wooding, S., & Grant, J. (2013). Developing a research evaluation framework.

SECTION 2: What are the main features of an economic appraisal?

There is no one single way to conduct an economic appraisal but the flow chart below gives an overview of the key steps in conducting an economic appraisal.

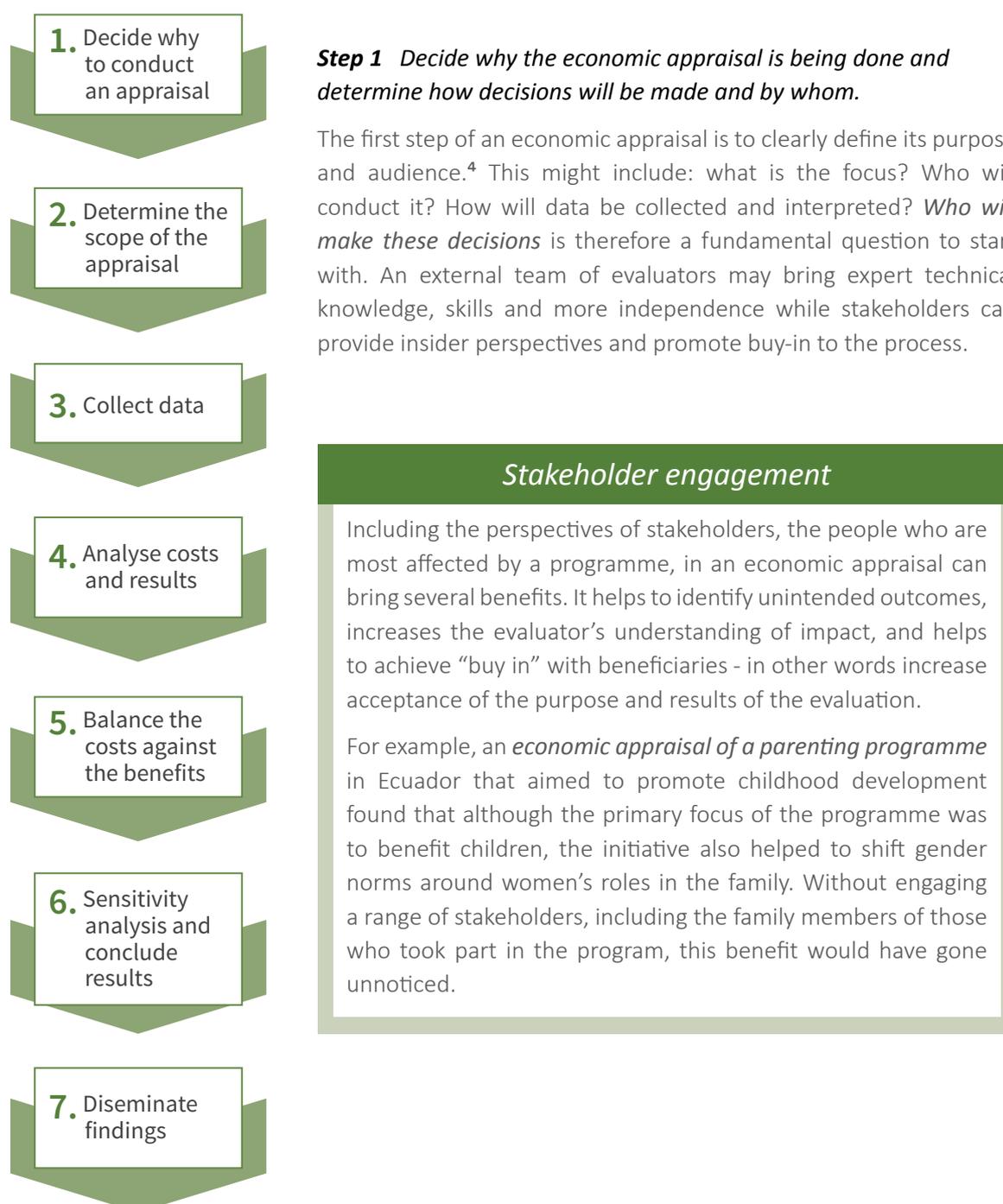


Figure 1: A flow chart highlighting the key steps in economic appraisals.

4) Better Evaluation (no date), Establish decision making processes, Available at: http://www.betterevaluation.org/en/plan/manage/who_controls (Accessed 05/11/18)

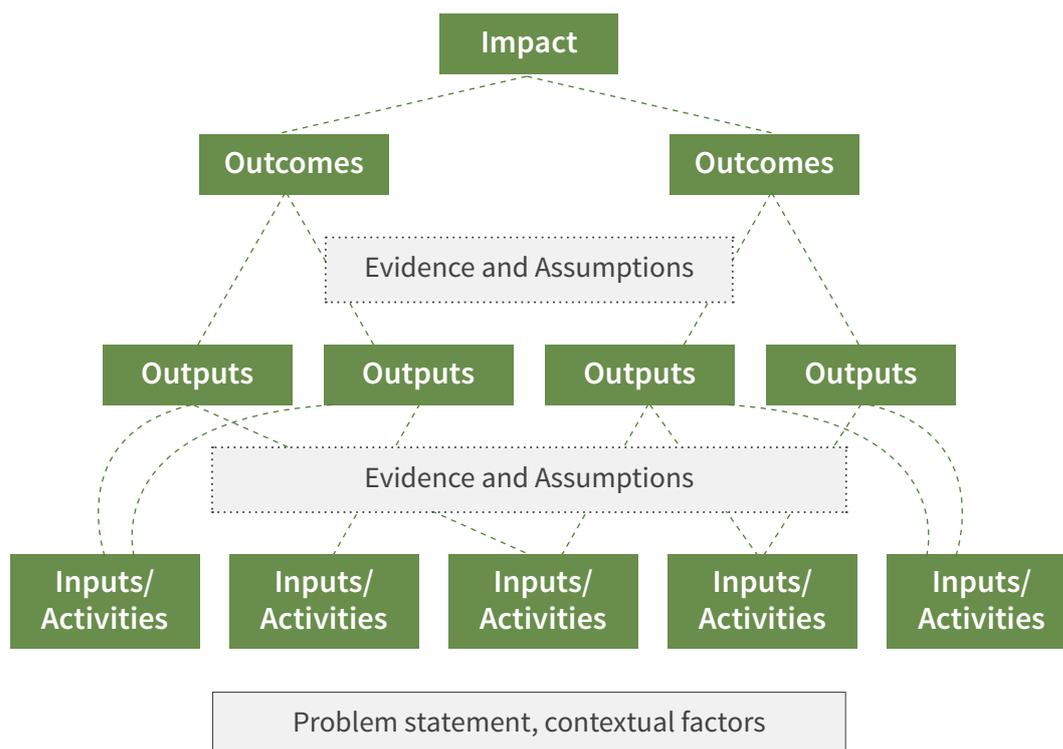
Step 2 Determine the scope of the appraisal

2.1 Start with a theory of change

A theory of change is a qualitative understanding of how and why change happens. It is important to develop or understand a programme’s theory of change before outcomes are measured as it clarifies the logic and assumptions that underpins a programme. It sets out clearly what the objectives of the programme are, what are the main problems that are being tackled and how the project or intervention expects to create change.

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- *Start with a theory of change*
 - *Consider the perspectives of the study*
 - *Decide which outcomes to measure*
 - *Decide how the outcomes will be measured*
 - *Consider time horizon*
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Example structure of a Theory of Change



Developing a Theory of Change

In a SROI study of the stigma discrimination component of the Alliance's Africa Regional Programme II, a major challenge in evaluation was that no formal theory of change was developed at the beginning of the programme for this component. Although, the programme had a log-frame with indicators focused on quantifiable results, this was not enough to measure social change on the programme. The SROI team developed a theory of change which defined the logic of the intervention from interactions with stakeholders and a review of programme documents. Some of the outcomes in the theory of change had developed, but more could have been achieved if the programme been more strategically focused. This could only have been possible if the programme from the onset had fully articulated what could be achieved as a result of the intervention.⁵

2.2 Consider the perspective of the study

The way we identify costs and results depends on the perspective from which we examine them. Costs can be examined from the perspective of the community, the government or the implementer. For example, health service delivery considers the cost incurred by the patient and the healthcare provider. The implementer considers the cost of delivering the programme or intervention. Economic appraisals should be "explicit about the perspective they adopt and exclusion of items must be explained in terms of their influence on the results".⁶

2.3 Determine which outcomes will be measured

Once a theory of change is mapped out, it is much easier to identify which outcomes should be measured. However, there are practical limitations on how much data can be collected. Not every outcome discussed in the theory of change will necessarily be measured in a programme economic appraisal.

Not every outcome discussed in the theory of change will necessarily be measured or put into a model in an economic appraisal.

Outcomes are prioritised depending on how important they are to understand the benefits and costs of a programme. These decisions should be driven by the goals of the programme and the purpose of the appraisal.⁷

2.4 Determine a way to measure outcomes

Once the outcomes have been determined, the next step is to outline how they will be measured. For example, if we were assessing whether an agricultural policy improves farmers' incomes, then the unit of measurement is simply their income, measured by directly collecting income data. However, if we were looking at whether an agricultural policy improved the well-being of the farmers' lives, then the unit of measurement needs to cover more

Wherever possible, economic appraisals should use the most generalisable unit for their sector.

5) Alliance International (2006), The true cost of Stigma - Evaluating the Social Return on Investment of the stigma and discrimination component of the Alliance's Africa Regional Programme II, Available at: https://www.aidsalliance.org/assets/000/002/381/SROI_Zambia_original.pdf?1453739463 (27/11/18)

6) Byford, S., Raftery J. (1998), "Perspectives in economic evaluation", BMJ, 316 doi: 10.1136/bmj.316.7143.1529

7) Emmi, A., Ozlem, E., Maja, K., Ilan, R., & Florian, S. (2011). Value for money: Current approaches and evolving debates. London, UK: London School of Economics, May, 14. pg 41

than just income. ‘Well-being’ will be a function of several areas such as the farmer’s preferences, income, health and education.

In some sectors, certain units of measurements are becoming increasingly standardised and common. In health programmes, the Quality Adjusted Life Years (QALY) is used as the central measurement of outcomes and in education, year of or increased level of education/schooling may be used. Wherever possible, economic appraisals should use the most generalisable unit for their sector.⁸

2.5 Consider time horizon

The supposed benefits of a programme may go on long after the programme has been completed. The timeframe of an economic appraisal must therefore be set and any future costs and benefits will have a discount rate applied.

Step 3 Data Collection

Data collection can be a mix of qualitative and quantitative approaches. The quantitative data can be collected from routine programme monitoring, official data in national or subnational databases, surveys and financial reports. Qualitative data can be collected through interviews and focus group discussions. Any significant benefits that cannot be quantified can be reflected in the narrative of the report when presenting the comparison of options.

Using quantitative and qualitative methods

A value for money analysis conducted in 2005 helped the UK Government choose between types of childcare. The analysis examined the difference between higher cost “integrated” childcare centres, providing a range of services to both children and parents, and lower cost “non-integrated” centres that provided basic childcare facilities.

The analysis included both a ‘hard exercise’ and a ‘soft exercise’. The hard exercise identified, quantified and monetised direct costs and benefits. The soft exercise identified and described qualitatively non-monetisable impacts, leading to option ranking.⁹

Step 4 Analysing costs and results

4.1 Cost analysis

The next step is to determine the costs of the programme. An overview of the total resource costs of each programme is key. These costs should include the financial and resource costs that the project incurs and the distribution of these costs over time.¹⁰ This may be referred to as a cost-analysis. Some economic appraisals use financial costs whilst others use economic costs. Financial cost considers actual costs such as personnel costs, office supplies, rent and other management costs of implementing a programme. Economic cost is broader and also counts the value of the resources if they were used for another productive purpose – known as opportunity cost. It also considers non-financial costs such as donated materials, donated spaces, or volunteer time.¹¹

8) Oxford Policy Management. Updating methods of VfM analysis following iDSI’s Reference Case for Economic Evaluation.

9) Prime Minister’s Strategy Unit 2004 example found at BetterEvaluation: <https://www.betterevaluation.org/en/evaluation-options/CostEffectivenessAnalysis>

10) Department for International Development. A Strengthened Approach to Economic Appraisals. DFID; 2009.

11) HITAP (no date), Cost Assessment, Available at: https://www.sph.nus.edu.sg/sites/default/files/Assessing%20Cost%20and%20Cost%20Effectiveness%20%28day%201_session%204%29.pdf

4.2 Analysing results

The impact on results of an intervention or programme can be analysed in different ways. For health programmes, results can be considered based on the immediate effects of the intervention. Results may use clinically defined units such as ‘change in blood pressure’ or ‘number of deliveries by skilled birth attendants’. It can also be considered in terms of generic terms such as general well-being, happiness or satisfaction which are labelled as ‘utilities.’ The utility of an intervention to an individual is its benefit and measures such as quality adjusted life years (QALY) are used to quantify this.¹²

Beyond analysing results, it is essential to understand whether the results can be attributed or credited to the intervention, and not to any other programmes or changes that happened during the programme’s life-cycle.

Definition of key terms¹³

- Cost Effectiveness Ratio compares the cost in monetary value to the effectiveness of an intervention in terms of physical units.
- Cost Benefit Ratio compares the cost in monetary value of an intervention to the benefits also in a common monetary value.
- Disability Adjusted Life Years measures the overall disease burden, expressed as the number of years lost due to ill-health, disability or early death.
- Quality Adjusted Life Years is a summary outcome measure used to quantify the effectiveness of a particular intervention.
- Opportunity cost of an intervention is what is foregone as a consequence of adopting a new or alternative intervention.
- Financial cost is the actual cost of a transaction or product whether presently or in the future.
- Economic cost is the total cost of choosing an intervention over another. It is a combination of financial cost, opportunity cost and non-financial cost.

Step 5 Balancing the costs and benefits

Once the impact and cost of the programme have been measured or estimated, an evaluation to weigh the costs of the programme against its benefits takes place. The result will be a single ratio of benefits to cost that is a number that reflects value for every £1 that is invested. There are several methods for this balancing act. The methodology that is chosen should depend on the nature of the outcomes and the purpose of the appraisal.

Here is a brief overview of four of the most commonly used methods for conducting an appraisal.¹⁴

Cost-effectiveness analysis	Compares Total Cost to Effectiveness of options to generate ratios which are compared to each other.
Cost utility analysis	Compares Total Cost to outcomes, where the outcomes represent a utility value, like happiness.
Cost benefit analysis	Compares Total Cost to Total Benefits to see if there is a net benefit overall.
Social return on investment	Compares Total Cost to Total Benefit, including non-monetised values, to see if there is net benefit overall.

Figure 2: Methods of conducting an appraisal

12) Miller, P., Health Economic Evaluation, Available at: https://www.rds-yh.nihr.ac.uk/wp-content/uploads/2013/05/4_Health-Economic-Evaluation-FINAL-2009.pdf

13) Definition of key terms can be found at <https://www.yhec.co.uk/tools-resources/glossary/>, <https://www.betterevaluation.org/en/>

14) Fleming, F. (2013). Evaluation methods for assessing value for money. Better Evaluation, published online.

Step 6 Sensitivity Analysis

A sensitivity analysis is used to understand how sensitive the overall conclusions of the appraisal are to assumptions made and data used in conducting the appraisal. If the ratio fluctuates widely as assumptions are changed, then the results can be said to be sensitive to the underlying assumptions. There might be a need to further review the assumptions to ensure that they are correct and also improve the quality of data, especially if there are concerns about data quality.

Step 7 Disseminate findings

The last part of the economic appraisal is to present the analysis along with assumptions and limitations and conclude the findings. This will involve presenting and visualising the results in an accessible way. A strategy should be put in place for communicating and disseminating the findings that is relevant to the purpose and appropriate for the audience.

SECTION 3: Insights to challenges and suggested solutions in conducting economic appraisals

Economic appraisals and evaluations are complex and face several, persistent challenges. Despite these problems, they are increasingly being used to evaluate and assess development projects. For example, they have been included in business cases for all UK Aid funded programmes. They have become a necessary part of building a case for new programmes and a standard way of reflecting on past successes and failures.

The purpose of this section is to highlight some of the challenges facing development practitioners and proffer appropriate recommendations from our experience at LAMP in conducting economic appraisals or evaluations. It is not unsurprising that many of these challenges are similar to those faced by value for money practitioners and we outline these in our VFM thought piece *On the Future of VFM*.

1. Paucity of good data

Understanding the benefits and costs of any development programme begins with the available data. The problem is that relevant data is often simply missing or is low-quality. This means that the results will have wide degrees of uncertainty or the results may not exist. Often, the cost-benefit or cost-effectiveness ratios presented in the conclusions mask the uncertainty related to, and the many analytical decisions needed to account for, data shortcomings.

2. Difficulty in assigning monetary values to non-monetised outcomes

Economic appraisals often require giving a monetary value to outcomes that do not have one. An extra year in school, a reduction in gendered violence or a more sustainable environmental system do not have an easily discernible monetary value. The major challenge with assigning monetary values is that adequate valuation data for specific outcomes may not be available and the cost of obtaining this data is often disproportionate for most programs. In some cases, it may be impracticable to obtain the data required.¹⁵

15) Spackman M. (2013), *Handling non-monetised factors in project, programme and policy appraisal*, Available at: <http://www.lse.ac.uk/GranthamInstitute/wp-content/uploads/2014/03/PP-non-monetised-factors-project-programme-policy.pdf>

Assigning a monetary value to girl's education

There are some useful examples of how to assign economic value to a non-monetary value. A study reported by UNICEF demonstrated how a woman is more likely to get a job and earn more money with a basic education. Every one percentage point increase in female education raises the average level of GDP by 0.37 percentage points. Every additional year of primary school increases the girls' wages by 10-20%.¹⁶

3. The challenge of finding standardised units of comparisons

One of the main issues economic appraisals face are how to compare alternative programmes. How can the value of different programmes be compared when dealing with completely different outcomes? Even when the outcome of multiple programmes are the same, economic appraisals can only be compared if they use similar methods in assigning value to non-monetised outcomes.¹⁷ Otherwise, the appraisal will end up with ratios where the benefits and costs refer to completely different values.

In health economics, one of the ways to overcome this problem is using what is known as a DALY unit. The 'Disability Adjusted Life Years (DALY) was developed as a measure of population health for assessing the burden imposed by a wide range of disease conditions.

4. Not all benefits and costs can be measured and quantified

In most development programmes, not every cost and benefit can be measured. One of the main challenges of economic appraisals are how to measure, quantify and value unintended or unmeasurable outcomes, with the aim of representing them as a simplified cost/benefit ratio. Another measurement challenge is how to incorporate long-term impact rather than focusing on short-term outcomes. The impact of a programme on long-term systemic change is harder to measure and quantify. For example, economic appraisals of programmes that tackle gender violence have been criticised for often undervaluing and missing the long-term change these programmes can bring.¹⁸

5. Economic appraisals overlook complex but important aspects of projects

Another related challenge faced by economic appraisals is due to their focus on quantitative assessment. There are several challenges associated with overemphasising the importance of numbers. Firstly, numbers are much easier to be taken out of context. It is hard to incorporate the contextual, social and institutional complexity that exists in development programmes simply through a ratio or number. A simple cost/benefit ratio does not reflect the assumptions, limitations and numerous decisions that went into the whole economic appraisal.¹⁹

A solution is the consideration of qualitative methods alongside quantitative approaches during economic appraisals. Qualitative methods such as interviews or focus group discussions can be used to assess complex changes at the outcome and impact level for programmes.

16) UNICEF: https://www.unicef.org/media/media_58417.html

17) Remme M, et al. (2015) What Works to Prevent Violence against women and girls evidence reviews. Paper 4: Approaches to scale-up and assessing cost-effectiveness of programmes to prevent violence against women and girls.

18) Kumaranayake, L. et al. 2000. Costing guidelines for HIV prevention strategies. *Birth*, 27, 189-90.

19) Emmi, A., Ozlem, E., Maja, K., Ilan, R., & Florian, S. (2011). Value for money: Current approaches and evolving debates. London, UK: London School of Economics, May, 14.

Recommendations for best practice

Building on our learnings from undertaking economic appraisals and evaluations at LAMP, as well as reviewing relevant literature on economic appraisals, here are some recommendations for conducting an appraisal.

1. Always start with a clear question of why you are doing an economic appraisal and an understanding of how results will benefit your organisation and recipients

It is not enough to claim that appraisals should simply be about accountability or for increased learning. It needs to be clear what is being held accountable and to whom, or in the case of learning, what do we expect people to gain and who will learn? Who is the intended user of the evaluation and why will it benefit them? Once these fundamental questions have been answered, then the appraisal can be designed with a clear and specific focus, helping to direct the decisions about where resources will be applied, which stakeholders will be involved in answering these questions (see recommendation 3), and how will the results be written up and distributed.

2. Develop or understand the theory of change of the programme

It is important to understand a theory of change before an economic appraisal starts modelling or measuring outcomes as it clarifies the logic and assumptions that underpin a programme. This is an important process in the SROI approach as the theory of change would ideally set out the main problems that are to be tackled and how the intervention expects to create change. In our opinion, it is helpful to understand the links and assumptions between inputs and outcomes when developing a good model for other approaches such as cost-effectiveness analysis, cost-utility analysis or cost-benefit analysis. As a result of this best practice, you will be able to prioritise where to look for outcomes, which stakeholders to engage and therefore will save the resources spent on the evaluation. A comprehensive guide for developing a theory of change can be found [here](#).²⁰

3. Understand and engage stakeholders

Stakeholders include both the intended users of a programme and also others who are unintentionally affected by the programme. Understanding and engaging stakeholders into the appraisal creates better evaluations, as they can help frame key questions, make sense of data that has been collected and increase the legitimacy of the evaluations findings in the eyes of those who are affected by the [programme](#).²¹

We have found that engaging with stakeholders early in the process and walking them through the plan is effective. Presenting findings to stakeholders before the write-up of a report helps capture contextual and explanatory factors.

20) DIY (no date), Theory of Change, Available at: <https://diytoolkit.org/tools/theory-of-change/> (Assessed 05/11/18)

21) Better Evaluation (2016), Understand and engage Stakeholders, Available at: http://www.betterevaluation.org/en/plan/manage/identify_engage_users (Assessed 27/10/18)

4. Aim to standardise methods used in economic appraisal or evaluation

This is important for promoting high standards of conduct, scientific credibility and for interpreting and comparing results of studies in similar and different settings. Wherever possible, it is advised to use standardised units for valuing outcomes, such as the DALY measurement for health programmes. This is difficult when studies are performed in different settings with different aims with respect to different interventions. However, a “balance must be found between the degree of standardisation that can be achieved and the necessity to tailor the approach to a specific study setting”.²²

5. When commissioning an impact assessment, include a cost-analysis as well to collate and present the cost data

This recommendation addresses the data problems that researchers may find in conducting an economic evaluation. Impact evaluations are usually an essential component of implementing a development programme. Therefore, ensuring that you have included a component to measure costs will give you the necessary data for an economic evaluation.

6. Consider using other approaches alongside your economic evaluation

Economic evaluation should not just be a standalone analysis based on available data, the comparison of options should also reflect costs and benefits which cannot be measured or quantified. Economic evaluations are one way to evaluate development programmes however, there are other ways to understand the benefits of programmes. To facilitate decision making, it is best used together with other cases for investment- such as the strategic or political case and rights-based approaches.

And finally:

As economic appraisals become increasingly used to assess the benefits and costs of development projects, it is important that all those who engage with them – as a funder, practitioner or stakeholder – remember their limitations and challenges. The recommendations for best practice should serve as a good starting point to initiate economic appraisals, so that the appraisals help develop better and more effective practice within development programmes.

22) Oostenbrink J.B (2004), Principles and progress in healthcare cost analysis: Applications to economic evaluations in COPD.
Available at: <https://repub.eur.nl/pub/33071/> (Accessed 05/11/18)