

Cost-Effectiveness Analysis and Nutrition

Exploring connections through programme evaluations

The Nutrition Embedding Evaluation Programme (NEEP) is a four-year project led by PATH and funded by the United Kingdom Department for International Development, concluding in 2017. NEEP was designed to build the evidence base for what works in improving nutrition by conducting credible, robust evaluations of innovative interventions implemented by civil society organisations.

NEEP interventions fall under one or more thematic areas: 1) agriculture (5 grantees); 2) cost-effectiveness analysis (4); 3) early childhood development (5); 4) infant and young child feeding (10); 5) micronutrients (6); 6) water, sanitation and hygiene (5); 7) women's empowerment (8); and 8) e-learning (1). Action Against Hunger | ACF International (ACF) is currently conducting three evaluations under NEEP, in Burkina Faso, Chad and Nepal. This brief describes the pros, cons and lessons learnt from ACF staff's experience with programmes, focusing on cost-effectiveness analysis and nutrition.

COST-EFFECTIVENESS ANALYSIS FOR NUTRITION AND FOOD SECURITY

Cost-effectiveness analysis (CEA) combines information on programme costs and outcomes, which tells more than looking at either of these components separately. Focusing on effectiveness alone limits the use of data in strategic decision-making. Focusing on costs alone may detract from programme quality. Whilst, traditionally, cost-effectiveness methods have been used in health interventions, there is growing evidence on the specific benefits and drawbacks of applying these methods to interventions focused on nutrition and food security outcomes.

Since 2012, Action Against Hunger | ACF International (ACF) has been engaged in developing capacity in CEA methods through conducting CEAs on nutrition and food security and livelihoods (FSL) programmes implemented in several ACF country offices. This brief summarises the experiences and identified pros and cons of CEA, as reported by ACF staff conducting these analyses at both headquarters (HQ) and the country level. The pros and cons relate to the CEA method in general, and to its application to nutrition and food security specifically.

PRO: EVIDENCE FOR ADVOCACY AND DECISION-MAKING

Amongst the general benefits of the CEA method is its usefulness in policy and advocacy efforts. Costs speak for themselves and can be used for objective decision-making.



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Results from CEA studies can be used for priority setting and advocating to a wide variety of stakeholders.

"Knowing the cost versus benefits is an excellent way to advocate for the intervention to partners [and] donors but also within the team." Nepal

Evidence on resource use and efficiency, generated by a CEA, can aid in improving programmes. Information on costs can be used for future budgeting.

"The cost-effectiveness can give a real idea about resources needed for implementation, and it can be used to make a budget about expanding or scaling up this strategy." Mali

“The CEA can provide a very useful additional degree of analysis on the comparison of different intervention modules and their cost-effectiveness. This is a key element to ensure that not only our beneficiaries receive the best possible service, but also that we can plan to provide such services in the most efficient way thus also reaching a higher number of people in need.” Pakistan

PRO: ACKNOWLEDGING CONTRIBUTIONS OF PARTNERS, COMMUNITIES AND HOUSEHOLDS

ACF cost-effectiveness analyses employ a societal perspective, in which it is possible to understand the broader programme resource use beyond institutional expense records. This involves engaging with partners and beneficiaries, bringing awareness of the “hidden inputs provided by the community and society” (HQ). Provided that all stakeholders are willing to share their cost information, discussing with different implementing partners can also allow triangulation of information—helping ensure that cost data are accurate and complete.

Discussing with partners about their costs can “highlight the full value of the service provided by partners (e.g., banks for cash distribution) and what that would cost the [nongovernmental organisation] if they had to provide this service themselves [along with] a realisation that the commission [the fee charged by financial service providers to transfer payments to beneficiaries in cash transfer programmes] is not pure profit” (HQ). Discussing with communities about their time and costs dedicated to programme participation “is important in order to make our programmes better with lower costs for beneficiaries” (HQ).

PRO: A NOVEL ANGLE FOR PROGRAMME EVALUATION AND LEARNING

As ACF builds experience in conducting CEAs, they are learning ways to improve methods and practices. Field staff are often involved in compiling data needed for these analyses, and implementing staff are key actors consulted during data collection. Whilst this is an additional task for field staff, they can also benefit from the experience.

“Often as field teams, we do not realise all the costs that go into making a programme function: logistics support, [human resources], etc. When I did the exercise of costs identification with the team, it was interesting for them to realise the costs involved. This definitely has an impact on motivation and accountability as a team.”

Nepal

There are also fears associated with a CEA, as implementing staff may perceive that their own performance or efficiency is being evaluated or audited. To alleviate these concerns, ACF researchers sensitise country office staff to reassure the exercise is not an audit or performance appraisal.

“As soon as they learn the objective and understand the importance of the study and their participation, almost everyone shows great support for the analysis. In fact, many expressed interest in learning more about the methodology.” Headquarters

PRO: QUANTIFYING COSTS FOR NUTRITION SCALE-UP AND INTEGRATION

According to the 2015 Global Nutrition Report, more evidence is needed on the cost of nutrition strategies,¹ an important limitation in the current evidence base, given that nutrition and medical supplies can be costly, particularly therapeutic foods and milks and their related logistical requirements.² High costs can limit the coverage and sustainability of these activities.

The cost data from nutrition CEAs can help to clarify—for both ministry of health and nongovernmental organisation partners—the costs of scaling up services and handing them to local partners, and aid partners in “planning and budget development of different activities and projects around nutrition and nutrition-sensitive approaches, where they otherwise lack evidence to guide their decisions in a field where previously little money used to be spent” (Pakistan).

PRO: MOVING BEYOND COST-EFFICIENCY IN FOOD SECURITY AND LIVELIHOODS

Field staff perceived that compared to nutrition programmes, FSL programmes have a stronger focus on economic analysis. However, the typical indicators used in existing analyses are outputs—number of beneficiaries reached, cost per unit of currency distributed—rather than outcome indicators. The shift to assessing cost per outcome of FSL programmes, particularly nutrition-related outcomes, is a positive step to understanding these interventions’ potential.

“The shift to looking at outcomes, rather than just outputs, is particularly important for cash and food distribution programmes; historically the focus of evaluations of these programmes has been on cost-efficiency: cost per beneficiary, cost per kilocalorie, cost-transfer ratios. In this sense, it is good to incorporate information on, and begin to better understand, the impact of these programmes.” Headquarters

CON: DANGERS OF REDUCTIVE INTERPRETATION

Despite their many benefits, CEAs are limited in that they contribute just one piece of information to programme evaluations, and should be considered along with other criteria. For example, a food distribution programme “may be the most cost-effective, but if it seriously undermines local markets and livelihoods it is not the best option” (HQ). Additionally, in the humanitarian field there has been historical resistance to judging programmes based on cost-effectiveness, in part because of value placed on general effectiveness and speed of response in humanitarian crises.³

There is a risk that decision-makers may simply compare final unit costs or ratios across programmes without considering contextual aspects that influence cost-effectiveness in different settings.

“The information gained on the relative cost-effectiveness of an intervention in one place may not be generalisable to other settings. For instance, differences in infrastructure available may make the same intervention cost-effective in one setting but not in another.” Pakistan

CON: CONFUSION BETWEEN COST-EFFICIENCY AND COST-EFFECTIVENESS ANALYSIS

It is possible that decision-makers may focus on cost information to identify the least costly approach, ignoring the connection between level of investment and quality achieved, which cost-effectiveness results provide. This is because “the pressure to obtain more funds causes government officials to be more focused on cost results rather than on the CEA as a whole. This could potentially be a risk in creating sustainability and create some issues when the government takes over projects” (HQ).

CON: CHALLENGE OF QUANTIFYING DIVERSE OUTCOMES IN NUTRITION AND FOOD SECURITY

CEA methods can be used to estimate the cost per any outcome of importance for an intervention. However, selecting an optimal outcome is not always a straightforward process. In the health field, where interventions often aim to prevent, reduce or eradicate a particular disease, the choice of outcome indicator for a CEA is relatively unambiguous.

For FSL and nutrition programmes, the process of selecting an outcome variable for a CEA may be more complicated. First, many such programmes have multiple objectives; this presents a challenge in either choosing one primary outcome or trying to quantify diverse outcomes and benefits in a

comprehensive way. An example of this challenge comes from a CEA conducted by ACF on a programme in Zimbabwe using community vegetable gardens to improve nutrition-related outcomes of people living with HIV. Whilst tangible outcomes were measured in terms of changes in household dietary diversity and food consumption, many other intangible benefits were also identified, including community cohesion and participants’ mental health.⁴ These important contextual benefits of the programme could not be quantified as part of the CEA *per se*.

In the health economics field, comprehensive outcome indicators, such as disability adjusted life years (DALYs) and quality adjusted life years, have been developed to address this challenge. These indicators quantify life quality, death and disability attributable to a disease using a standard measure that can be compared across different disease states, and used as outcomes in CEAs. For example, estimates of cost per DALY allow decision-makers to prioritise investments based on which interventions give the most value for money in reducing disease in general.



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To some extent, nutrition programmes can use these methods, since many anthropometric measurements are quantifiable health outcomes. However, whilst not every intervention will have an impact on health outcomes, many FSL and nutrition programmes may improve non-health outcomes such as dietary diversity and access to and consumption of nutritious foods.

One drawback to using these non-health outcomes for CEA is that other researchers or policymakers might be unfamiliar with them, which could limit uptake of study findings. Additionally, currently there is no comprehensive measure for non-health outcomes. Whilst there may be interest in developing a comprehensive standard indicator for dietary

diversity and food security outcomes, this approach may still be considered too limited to capture the full scope of benefits from such programmes.

Finally, dietary diversity and food security indicators are often indicated as secondary or intermediate outcomes for nutrition programmes, and potentially for FSL programmes, rather than the primary objective for which the programme was designed. Assessing the cost-effectiveness of these programmes using secondary outcomes may not always produce the most relevant or convincing evidence of cost-effectiveness.

CONCLUSION

ACF will continue working to build the evidence base on the cost-effectiveness of nutrition and FSL interventions. In doing so, they will strive to ensure a balance between standardisation of methods and appreciation of context: both the geographic setting in which the activity takes place and the potential and limitations of specific interventions. In this way, ACF aims to build a rich inventory of evidence on cost-effectiveness of nutrition and FSL interventions to increase our understanding of programme efficiency and find ways forward to improve their effectiveness.

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