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Cost-Efficiency Analysis of Basic Needs Programs: Best Practice Guidance for Humanitarian Agencies

Produced as a contribution to the Grand Bargain Cash workstream
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The impetus for this document came out of work undertaken as part of the Grand Bargain Cash workstream and specifically the sub-workstream on efficiency, effectiveness and value for money. While the activity itself was led by The International Rescue Committee (Caitlin Tulloch) and United States Agency for International Development (Ruco Van Der Merwe), it would not have been possible without the input from a wide range of actors. Special thanks goes to the following individuals who provided technical input during various stages of development. Adam Trowbridge (USAID/FFP), Victoria James (DFID), Niklas Rieger (DI), Ye Shen (Tufts), Anne Valand (WFP), Liz Tromans (IRC), Susanna Sandstrom (WFP), Dina Brick (CRS) and Alan Grundy (CRS).

BACKGROUND

With rigorous, consistent estimates of the cost-efficiency and cost-effectiveness of different approaches, humanitarian agencies would be able to better allocate limited resources towards approaches that deliver the greatest reach and impact. However, finance and monitoring systems are not positioned to produce this data, so optimizing value-for-money is difficult in practice. To address this challenge, the Cash workstream of the Grand Bargain identified measurement of cost-efficiency and cost-effectiveness of cash assistance as a priority for the 2017-2018 workplan. USAID and the IRC volunteered to co-lead the sub-workstream with support from CaLP.

The initial objectives of the sub-workstream were to gather and synthesize learning on existing metrics for measuring cost-efficiency and cost-effectiveness of humanitarian assistance aimed at meeting basic needs, particularly through cash and in-kind distributions. In April 2018 this work culminated in a Cost-Efficiency and Cost-Effectiveness in Humanitarian Assistance (CE2HA) workshop in Washington, DC. The workshop provided a platform for more than 30 technical experts from across the humanitarian community and academia to share analytical methods which could be applicable for multi-sector assistance delivered through different modalities. Recommendations from the workshop were shared at both the Grand Bargain Cash meeting in June 2018 as well as Good Humanitarian Donorship Cash meeting.

CE2HA Phase 1 findings noted that one of the primary gaps was regarding a consistent understanding of the purpose of cost-efficiency analysis, and methodology for conducting such analysis. The lack of consistent methodology is a problem because cost-efficiency analysis is inherently comparative: We learn what programmatic or contextual features drive greater efficiency by comparing across programs. But if programs are analyzed with inconsistent methodologies then we can't be confident whether apparent differences in results are driven by actual differences in programs, or differences in how costs and outputs were tabulated. Inconsistency in methods is driven in part by the differing structure of various agency financial systems and the lack of agreed upon methodology (especially around cost categorization and output counting). This is exacerbated by concerns (particularly by implementing partners) around the transparent usage of cost-efficiency results, especially by donors in their funding decisions, which makes cash implementers hesitant to produce this data at large scale. In response to these findings, CE2HA Phase 2 activities prioritized providing guidance to ensure more rigorous and consistent cost-efficiency analysis by humanitarian actors, and to develop shared understanding of how to appropriately interpret and use cost-efficiency analyses of cash.

PURPOSE

The overall objective of this activity, and this guidance document in particular, is to “improve capacity to conduct rigorous and consistent cost-efficiency analysis in humanitarian assistance.” This will be done through the development of a technical guidance document to provide more overall structure for how to approach cost-efficiency analysis in humanitarian settings.

Cost-efficiency analysis refers to the analysis of cost per output of program or activity, allowing you to compare cost-per-output for programs which all produced the same output. Such analysis is useful when choosing among alternative delivery models (e.g. different modalities of transfer) during program design, or to evaluate one aspect of value-for-money during final evaluation. To achieve rigorous, consistent analysis requires a common approach to cost categorization and allocation, i.e. what costs are included and how they are assigned to different activities within grants. On the other side of the equation, it requires a consistent approach to counting the outputs of cash or other basic needs programs. For the purposes of cost-efficiency calculations this means the

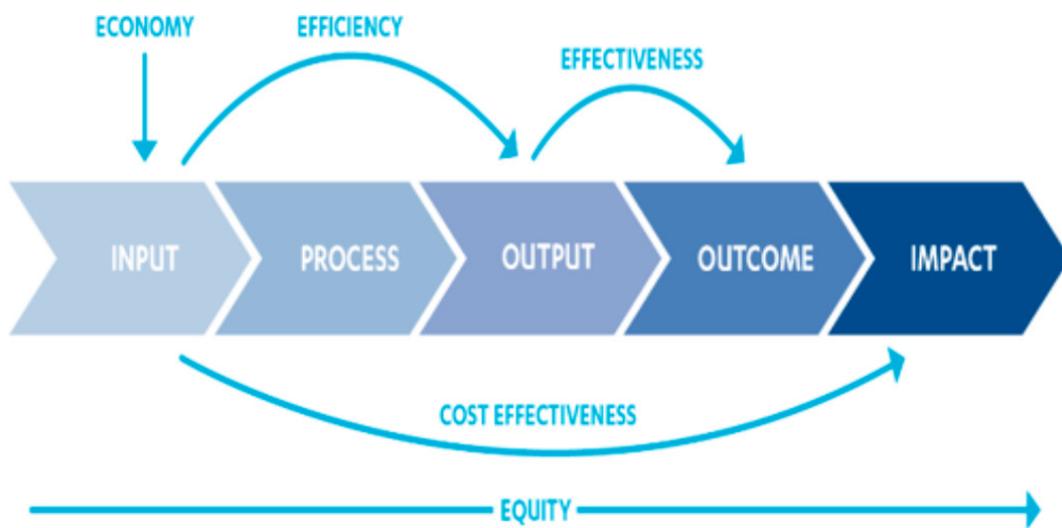
dollar value of cash or goods transferred to beneficiaries, although other output/outcome indicators should also be tracked and used in decision-making.

CE2HA envisions that this guidance will provide several distinct benefits:

- Consistent analytical methods - Currently cost-efficiency analysis is conducted in several different ways allowing for minimal comparison across methodologies and variation in how findings are interpreted. Building on lessons learned and technical expertise, this guidance seeks to provide a technically sound, clearly documented methodology so that agencies can consistently conduct cost-efficiency analysis in such a way that provides some level of comparability. Beyond comparing cost per dollar transferred, sound and consistent cost-efficiency analysis also forms the basis for cost-effectiveness analyses that agencies may wish to conduct.
- Transparency - Providing a clear methodology for cost-efficiency analysis allows humanitarian partners the assurance that they are providing an analytical product which is clearly understood and widely endorsed. CE2HA Phase 1 noted that cost-efficiency results and financial breakdowns are rarely shared openly, due to uncertainty about how the results will be interpreted and utilized (specifically by donors). This guidance seeks to clearly lay out the limitations of the methodology and identify best practices for use, thereby creating trust between the producer and consumer of data. With the publication of The Common Donor Approach for humanitarian cash programming signatory donors provide a clear position on the role that they see efficiency playing in regards to effectiveness; “Donors want to see both effectiveness and efficiency maximized. This means meeting people’s most pressing needs in ways that represent the best outcomes.”
- Learning - The uptake of a consistent, rigorous cost efficiency analysis method will allow for the rapid expansion of knowledge and learning about what drives cost-efficiency of basic needs programs. This will improve our ability to understand how context, modality, scale, implementing partners/donors, disaster types and other variables influence efficiency across a variety of humanitarian sectors. In turn, this can enable allocation of resources to the most efficient and appropriate modality in a given context, improving outcomes for humanitarian clients.

Value-for-money is often divided into several facets: economy, efficiency, effectiveness, and equity.

Figure 1. “Four E” Value-for-Money Concept from DFID



Cost-efficiency analysis addresses the second of the “four Es”, maximizing the programmatic outputs achieved per dollar spent on inputs. Thus, cost-efficiency analysis provides a good measure of “operational” efficiency. However, there may be a trade-off between cost-efficiency and the overall program effectiveness or equity. To take an extreme example, you could maximize cost-efficiency by providing extremely large one-time transfers to people who already have mobile money accounts. However, this approach might be less effective because people were unable to save their money, and so could not meet their basic needs several months after the large transfer was given. It might also be inequitable, since targeting people who already have mobile money accounts may exclude the most vulnerable or remote segments of the population. Like with all cost analysis, cost-efficiency results should therefore be interpreted alongside other information about the quality of the program, and used to inform trade-off decisions rather than as a final judgment about a program.

 **Best practice:** When recording the result of a cost-efficiency analysis in a grant report or public document, be sure to also include information about the program which is key for interpretation:

- Number of households reached
- Value of transfers/goods given
- Number of transfers given per household
- Targeted population characteristics
- Targeting method used to identify beneficiaries
- Time to disbursement
- Modality used, including method of transfer for cash programs
- Market conditions affecting the purchasing power of assistance, especially hyperinflation or large seasonal variations in price levels

Cost-efficiency analysis estimates the ratio of program costs to outputs created, allowing you to compare cost-per-output for programs which all produced the same output. Such analysis is useful when choosing among alternative delivery models (e.g. different modalities of transfer) during program design, during implementation to inform course corrections, or during final evaluation to assess performance in terms of value-for-money. For instance, cost-efficiency analysis might reveal the expected cost per dollar of value transferred through a cash program versus an in-kind distribution program. It can also help to uncover how contextual or programmatic features drive the cost per output. For instance, how will the cost per dollar transferred of a cash program change when targeting can be achieved through an existing social safety net platform, versus when targeting surveys must be undertaken directly by implementers? As these examples reinforce, the value of cost-efficiency data is comparative: we can judge the performance of a given program, or learn about how cost-efficiency will be affected by contextual features, only when we have other programs’ results to compare to.

 **Best practice:** Before conducting a cost-efficiency analysis of a given program, identify the comparative data points you will use when interpreting the results. Consider whether comparative data is available for programs from the same region, and how similar the comparator programs are in terms of target population, scale, etc.

With this understanding of the purpose of cost-efficiency analysis, the question arises of how often and when humanitarian agencies should be conducting this analysis? The methodology described below takes time and resources to implement well, and requiring such analysis for every basic needs program run by every implementing agency could entail an enormous amount of work that would be unlikely to be worth the effort. Rather, individual agencies, cash working groups, and donors should think strategically about how they want to use resulting information, and invest in analysis accordingly.



Best practice: There are two basic use cases for cost-efficiency data, which determine what programs you would want to conduct cost-efficiency analysis for.

(1) Performance Management: If the goal is to drive high performance for one specific program, then you may be able to rely on existing data to provide comparative data to set a target and measure performance. For instance, the IRC now has cost-efficiency results for six cash programs in Iraq, providing a sense of what a reasonable cost-transfer ratio is in that country. We are able to draw on that to set performance targets, and the only new analysis necessary in order to do performance management of a new program is the analysis of that new program itself. On the other hand, if comparative data does not already exist but performance management is a priority, a donor or implementer may wish to invest in cost-efficiency analysis of several similar programs at once. In this case you would want to hold as many of the common features that affect cost efficiency (for more see page 20) when defining that sample. A minimum of three comparative data points from the same region and ideally the same country is strongly recommended.

(2) Learning: Identify the specific question you are hoping to answer about cost-efficiency or cost effectiveness, ideally in the form of a comparative statement about two types of programs. For instance, you might want to know whether consortium delivery models are more cost-efficient than single-agency delivery, or you might want to know whether basic needs programs which target female-headed households cost more per dollar transferred than those which target the entire population. You should then identify programs which fall into those two separate categories (e.g. single-agency delivery vs. consortium delivery), but have as many other features in common as possible (e.g. same region, similar target populations, similar response phase). The more programs of each type you can analyze the stronger your conclusions will be, but in general it is difficult to draw even tentative conclusions from a data set with fewer than three programs of each type (i.e. six total).

CONSIDERATIONS AND LIMITATIONS

- Comparability: While the proposed methodology allows for a consistent methodology to cost-efficiency analysis, it is important to recognize that this does not imply that cost-efficiency results are expected to be the same across different contexts, programs, or target populations. Evidence to date indicates that geography, context, and scale of programs significantly affect cost-efficiency. Rather than seeking a globally applicable benchmark for the cost-efficiency of cash programs, the value of cost-efficiency analysis is in identifying what a reasonable cost per dollar of value transferred is, given the constraints of serving a particular population in a particular context. This is discussed further in the Interpretation section.
- Cost-efficiency vs cost-effectiveness: While cost-efficiency analysis will give an indication of the associated cost to deliver an output, it is not looking at whether those outputs result in desired outcomes (cost-effectiveness). It is therefore important to ensure that the programming outputs are appropriately designed to fill an identified need and to have monitoring in place which measures whether outcomes are indeed changing. It must be understood that a program which is more cost-efficient is not automatically more cost-effective, and cost-efficiency results should always be interpreted alongside other information when making a judgment. For example, complementary activities and support services might make a program less cost-efficient but could increase its cost-effectiveness if they ensure that people are able to access markets to

purchase the goods which meet their basic needs. This is discussed further in the Interpretation section.

METHODOLOGY

This section discusses the methodological decisions which arise when conducting cost-efficiency analysis, and suggests a standard approach for dealing with these issues in the context of humanitarian basic needs programs. Analysis will only be possible, however, when a basic level of disaggregated data is available for the program being examined. Specifically, analysis should be based on actual program expenses (not budgets, unless you are conducting ex ante analysis for planning purposes), and should be available at the level of individual budget lines. If expense data has been merged into categories (e.g. National Staff, Transportation, Program Supplies) it is unlikely to be possible to conduct rigorous analysis, because separation of the costs of cash delivery from other program outputs will be impossible. Finally, it is strongly preferable to have cost-efficiency analysis conducted by or with the program staff who oversaw implementation, to provide details of program implementation and inform decisions about the allocation of resources.¹

Figure 2. Example of Insufficient, Sufficient Data for Cost-Efficiency Analysis

| A | B | C | D | G |
|----|-------------------------|--------------------|--------------------|---------------------|
| 1 | | | | |
| 2 | Donor Name: | DFID/MC | | |
| 3 | Country/Region: | Iraq | | |
| 4 | Program Name: | CCI | | |
| 5 | Program Dates: | 9/1/2017-2/1/2019 | | |
| 6 | Cost Category | Objective 1 | Objective 2 | Total Budget |
| 7 | a. Personnel | 499,946 | 237,552 | 737,498 |
| 8 | b. Fringe Benefits | 234,277 | 62,860 | 297,137 |
| 9 | c. Travel | 37,977 | 10,544 | 48,521 |
| 10 | d. Equipment | - | - | - |
| 11 | e. Supplies | 8,927 | 2,232 | 11,159 |
| 12 | f. Contractual | 1,531,565 | 35,930 | 1,567,495 |
| 13 | g. Construction | - | - | - |
| 14 | h. Other | 86,669 | 21,667 | 108,336 |
| 15 | i. Total Direct Charges | 2,399,361 | 370,785 | 2,770,146 |
| 16 | j. Indirect Charges | 220,741 | 34,112 | 254,853 |
| 17 | k. TOTALS | 2,620,102 | 404,897 | 3,025,000 |

| I | J | M | N | O | P | U |
|----|--|----------------------------|---------------------|------------------|-----------------------|---------------|
| 1 | | Donor Name: | | | | |
| 2 | Country/Region: | | | | | |
| 3 | Program Name: | | | | | |
| 4 | Program Dates: | | | | | |
| 5 | | Year One | | | | |
| 6 | Description | Level of Effort (%) | Months /Days | Unit Cost | Total Spending | |
| 7 | SUPPLIES | | | | | |
| 8 | 353 General Equipment (\$500 to \$4999) | | | | | |
| 9 | 354 Computer - Laptop | 100% | 1 | 1,235 | 4,941 | |
| 10 | 355 IT Equipment (Tablets, mobile phone) | 100% | 1 | 120 | 956 | |
| 11 | 356 Furniture | 100% | 1 | 239 | 478 | |
| 12 | 357 Computer - Laptop | 100% | 1 | 1,235 | 3,705 | |
| 13 | 358 IT Equipment (Tablets, mobile phone) | 100% | 1 | 120 | 598 | |
| 14 | 359 Furniture | 100% | 1 | 239 | 478 | |
| 15 | TOTAL SUPPLIES | | | | | 11,159 |
| 16 | CONTRACTUAL | | | | | |
| 17 | PROGRAM ACTIVITIES | | | | | |
| 18 | General Program Activities | | | | | |
| 19 | 365 430 Office Supplies - Program | 87% | 12 | 159 | 1,680 | |
| 20 | 366 431 Office Supplies - Program | 100% | 1 | 319 | 319 | |
| 21 | 367 432 MPC- Multimonths (2months) | 100% | 2 | 319 | 638 | |
| 22 | 368 433 MPC- Multimonths EVs (3 months) | 100% | 3 | 319 | 9372 | |
| 23 | 369 434 Money Transfer Agent Fee | 3% | 1 | 312,385 | 312,385 | |
| 24 | 370 435 MPC- One Off | 100% | 1 | 319 | 109,653 | |
| 25 | 371 436 MPC- Multimonths (2months) | 100% | 2 | 319 | 65,792 | |
| 26 | 372 437 MPC- Multimonths EVs (3 months) | 100% | 3 | 319 | 131,584 | |
| 27 | 373 438 Money Transfer Agent Fee | 3% | 1 | 307,030 | 307,030 | |
| 28 | 374 439 MPC- One Off | 100% | 1 | 319 | 9,211 | |
| 29 | 375 440 MPC- Multimonths (2months) | 100% | 2 | 319 | 82,878 | |
| 30 | 376 441 MPC- Multimonths EVs (3 months) | 100% | 3 | 319 | 49,727 | |
| 31 | 377 442 Money Transfer Agent Fee | 3% | 1 | 319 | 98,274 | |
| 32 | 378 443 Program Related Meetings | 100% | 1 | 232,057 | 232,057 | |
| 33 | 379 444 Monitoring & Evaluation | 100% | 1 | 1,594 | 3,188 | |
| 34 | 440 Monitoring & Evaluation | | | | | 1,594 |

The methodology defined below corresponds to the method followed by the Systematic Cost Analysis (SCAN) tool, which is jointly managed by a Consortium comprised of Accion Contra el Hambre, CARE, International Rescue Committee, Mercy Corps, and Save the Children. The SCAN tool provides several added benefits beyond “by hand” analysis. Firstly, by automatically importing data from linked finance systems it saves analysts the time and headache of assembling spreadsheets. Secondly, by providing guided facilitation for decisions about what costs to include and how to allocate them, it promotes easier adherence to this methodology. Thirdly, by storing analysis results and underlying calculations in a consistent format (visible only to the organization doing the analysis) it enables better knowledge management and allows for simple sharing of results, if agencies so desire. While SCAN eases the process of conducting rigorous cost-efficiency analysis, following this methodology should yield the same result and allow for consistency with the wider body of cost-efficiency data being developed.

¹ Given these requirements, cost-efficiency analysis according to this methodology will only be possible when the necessary data and resources are in place. Where donors or coordination groups are going to require cost-efficiency reporting, additional funding or support may be necessary to put the necessary data and staff input together into an analysis.

1. Defining the program to be analyzed

Defining a time frame and geographic scope: One often-overlooked step in cost-efficiency analysis is clearly defining what exactly the analysis will cover, including the time period of program implementation and the geographic areas considered in scope for the analysis. Programs may run for several years, funded by successive donor awards, and so drawing a line around “the costs” or “the outputs” can be difficult.

! **Best Practice:** Do not conduct cost-efficiency analysis of program implementation for any period of time less than six months (unless the entire program was completed in six months or less), as spikes in procurement or distribution will create distortions in the measured cost-efficiency.

! **Best Practice:** Where a program incurs start-up costs before distribution actually begins (e.g. time spent negotiating Hawala contracts), you should define the time period of your program to include those pre-distribution activities, as they were necessary inputs to program delivery. If start-up costs are especially high, it is worth analyzing the resulting program over as long a time period as possible so that those start-up costs are matched with the full set of outputs they helped produce.

Similarly, a program may provide basic needs assistance for populations in different areas at different times, possibly overlapping with other programs in certain regions.

! **Best Practice:** Do not attempt to analyze the cost-efficiency of programming in geographic areas smaller than the total area supported by your awards, unless you have a clear basis for dividing up country-level management and administration costs across different sub-offices, bases, or states.

In general, the most important thing is to arrive at some definition of the time frame and geographic scope of the program, usually corresponding to the time period of the award funding it. This definition can then be used to put boundaries around which costs and outputs will be counted, and to ensure that the scope of costs and outputs match.

Identifying all funding sources: For a given humanitarian program, calculating the cost-efficiency of basic needs programming means identifying all of the inputs necessary to make the delivery of cash (or other basic needs modalities) possible. If you think of a program as a recipe, then the inputs are all of the “ingredients” necessary to make that recipe.

! **Best Practice:** For basic needs transfer programs, the costs of delivery are not restricted to the fees paid to transfer money to beneficiaries. They cover the costs of all aspects of delivery and program management, including:

- Pre-distribution assessments and targeting (e.g. market surveys, vulnerability assessments)
- Preparing for distributions (e.g. assembling beneficiary lists, planning travel)
- Distributing assistance (e.g. wire transfer fees, local shipping and transport)
- Post-distribution activities (e.g. post-distribution monitoring)
- Grant management and coordination meetings (e.g. Cash Working Group meetings)

In some cases, all of the inputs for a cash program may be funded by a single funding source, but in other cases (for example) the funding for the targeting process might come from one grant, while a top-up of extra cash to be distributed came from another. If the costs of certain inputs are omitted because they came from a different funding source, cost-efficiency results will be distorted--it wouldn't have been possible to distribute that top-

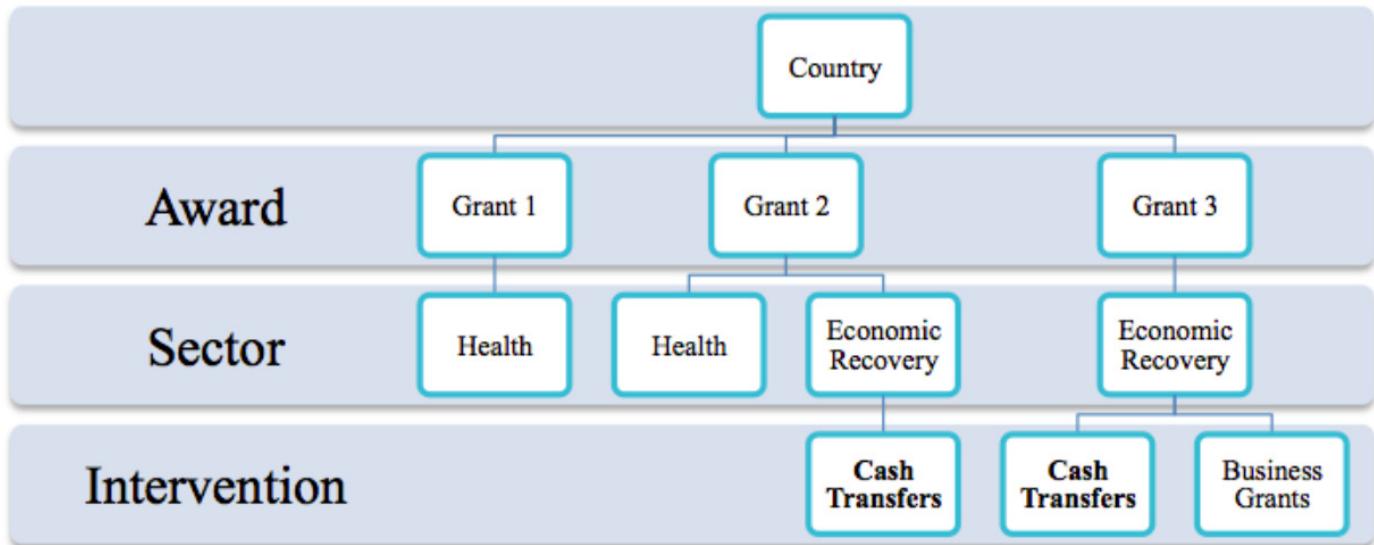
up set of cash transfers without the original targeting system which identified beneficiaries. If multiple funding sources contributed to the inputs of a single basic needs program, the expense data from those sources should be merged to start the analysis.

! **Best Practice:** Before starting an analysis, ask yourself “what are all of the funding sources which covered the inputs necessary for this basic needs program, in this area over this time period? Where funding for program inputs came from multiple sources, combine expense data from all of those funding streams in your analysis.

Separating out activities: Often, grants or contracts will include funding for several different activities--for instance, a cash transfer program which also provided legal counseling services to clients found to be lacking government ID. It may be easy to identify which direct costs were necessary for one output versus another, if expenses are tracked clearly. Following that same example, the spending line titled “Cash Transfers” is almost certainly a part of the cash distribution program, while the spending line titled “Legal Clinic Rent” is almost certainly a part of the legal aid program. But there will also be costs shared between the cash program and other outputs, which will need to be allocated somehow. In order to do this accurately, analysts must first develop a comprehensive picture of all of the activities supported by the grants/contracts whose data they are using. This information will later be used as the basis for decisions about how to allocate shared and indirect costs.

! **Best Practice:** When funding sources included money for activities other than basic needs transfers, begin your analysis by mapping all of the outputs produced by all of the different grants or contracts you determined support your basic needs program. This can be achieved by consulting log frames and speaking with programmatic staff who managed implementation.

Figure 3. Example Activity Map for Cash Transfer Programs Funded by Several Grants



2. Defining what counts as a “Cost”

Having now defined the geographic and time scope of implementation you wish to study, and identified one or several funding streams which supported that implementation, you will have assembled a potentially large set of expense data. As discussed above, the expense lines you can see in this data might be directly related to the

basic needs program you are analyzing, but might also have supported other outputs, or been split between basic needs and other things. The next step in the process is to identify which of those expenses were relevant to basic needs distributions, and (for those which were shared) in what proportion.

Programmatic/Direct Costs: All direct costs which can be linked to the delivery of the basic needs program should be included. This may be obvious, for instance if an expense line is marked “Wire transfer fees for cash distribution”. It may be less obvious, for instance if an expense line were marked “Economic Recovery Manager” and you were unsure whether that manager oversaw implementation of multiple economic recovery activities.

! **Best practice:** List out all expense items relevant for the funding streams and time frame you have identified. Work with program staff who oversaw the program to identify which direct expense lines were necessary for the intervention you are analyzing, and which were not.

There may also be expenses which were “direct”, i.e. which were dedicated 100% to the outputs of that particular award, but which were still split among multiple different outputs on that grant. For instance, if the Economic Recovery Manager oversaw both a cash transfer program and a business grants program, you would not want to allocate 100 percent of the cost of that staff position to the cash transfer program.² It is then necessary to determine some split of that cost between the cash output you are studying, and every other output whose delivery they supported.

Most implementer financial and HR systems track allocation of effort only to the level of awards, and not to different outputs within a particular award. As such, there are unlikely to be any existing data sources to consult to determine the allocation of costs across different outputs. In academic cost studies, additional data collection will often be commissioned to address this question, for instance with time diaries or direct observation by surveyors. However, these methods are too onerous to be practical for routine analysis. Instead, the best feasible approach is to ask programmatic staff to estimate how time and resources were used across different outputs based on their personal experience.

! **Best practice:** For direct costs which were used to support multiple outputs (usually staff time or transportation), ask program staff to estimate what proportion of the time of that resource was spent on the output you are studying, versus all others funded by the same award. Clearly document this allocation percentage in your cost model.

Shared Costs: Shared costs³ are those which are shared across multiple awards, and are not directly tied to the operation of a specific program. These typically include general administration and management expenses (e.g. management staff salaries and benefits), organizational infrastructure (e.g. rent and utilities, software licenses), and other costs incurred for the benefit of all programs within the country office (e.g. HR department, IT staff). Even though these expenses cannot be tied directly to one output, we know that the inputs are necessary to allow programs to function. But, unlike the example of an Economic Recovery Coordinator above, it isn’t possible to easily observe how a country director’s time supports cash transfers versus entrepreneurship versus other programs.

Assuming we start from award-level data about spending on shared costs, the allocation of shared costs should be based on the proportion that the basic needs distribution comprised of the entire spending on that award. In other words, if the cash distribution program accounted for 20 percent of the direct costs of a grant, then 20

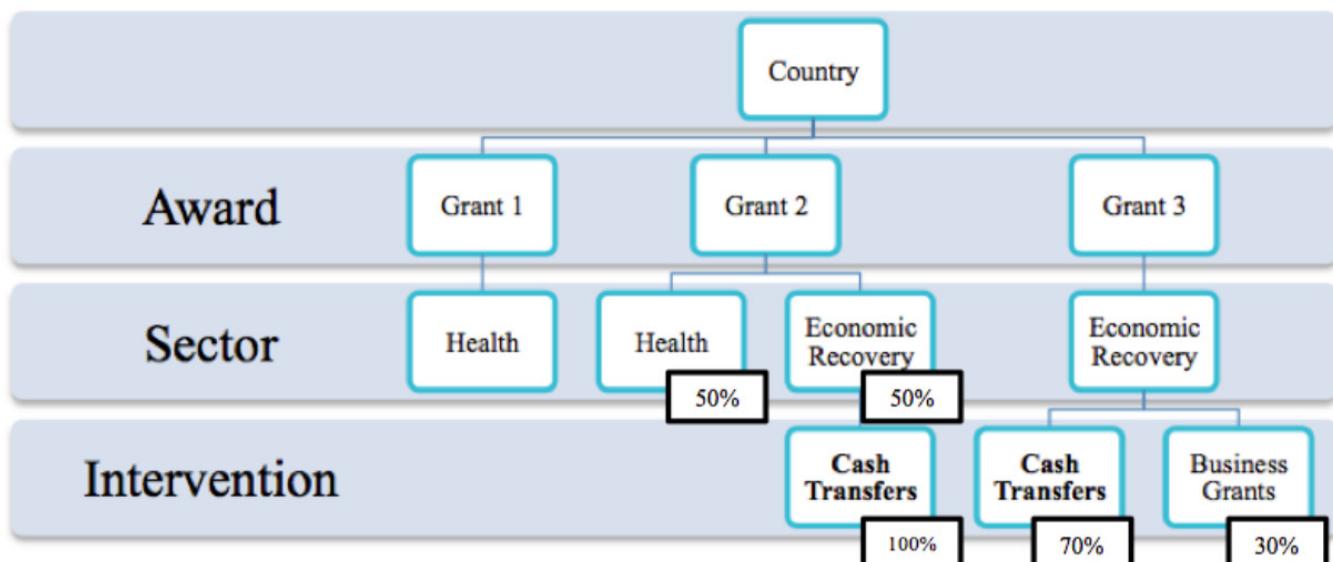
² That cost would include not only their salary, but benefits, housing allowances, etc. The entire cost of having that person on the job.

³ Also called “Direct Shared Costs” in the general framework for the NGO cost recovery, developed by NRC.

percent of the country director's time charged to that grant should be allocated to the cash transfer program, and included as a cost.

Returning to the example above, consider a case where you are trying to analyze the cost efficiency of a cash transfer program which was jointly funded by Grant 2 and Grant 3. Based on the overall expenses from all sectors, you can figure out what proportion of direct costs each sector comprises of the total budget. Imagine, for example, that Health and Economic Recovery each comprise 50 percent of the costs of Grant 2, and Economic Recovery comprises 100 percent of Grant 3's costs. From your calculation of the direct costs of cash delivery (see above section), you also have information about what proportion of Economic Recovery costs were for cash versus other things. Specifically, you know that cash transfers were 100 percent of the Economic Recovery costs on Grant 2. Imagine that, from your detailed examination of the direct cost items, you establish that cash transfers comprised 70 percent of the Economic Recovery costs on Grant 3, while business grants comprised the other 30 percent.

Figure 4. Figuring Out Allocation of Shared Costs



In this case, we have all of the information we need to estimate the allocation of shared costs for Grant 2 and Grant 3 to the cash transfer program. Note that, because we assume the starting point of award-level expense information, this calculation must be done separately for Grant 2 and Grant 3. The allocation percentage derived from data about one grant applies only to the cost items from that grant.

$$\text{Shared Cost Allocation} = \frac{\text{Cash Direct Cost}}{\text{Economic Recovery Sector Costs}} \times \frac{\text{Economic Recovery Sector Costs}}{\text{All Award Direct Costs}}$$

For this specific example, that means that:

$$\text{Shared Cost Allocation, Grant 2} = 100\% \times 50\% = 50\%$$

$$\text{Shared Cost Allocation, Grant 3} = 70\% \times 100\% = 70\%$$

! **Best practice:** Figure out a single allocation percentage for all shared costs on each award, based on total direct costs for that award specifically. If you have specific information about more or less intensive resource use by certain shared resources (e.g. a Finance team member who worked primarily on planning cash distributions) based on program staff knowledge, you can supersede this general assumption about shared costs for that one cost item.

Indirect Cost Recovery: Indirect costs, usually referring to headquarters level costs such as grant management or high-level administration, are a necessary ingredient to running humanitarian programs and should be included in the full cost of a cash transfer program. Perhaps more importantly, different organizations draw the line between “shared costs” and “indirect costs” differently--one implementer may fund their regional director’s salary out of ICR, while another might fund it out of shared costs itemized within a grant budget. This means that, if ICR were excluded from the estimates of program cost, it would drive artificial differences between the apparent cost-efficiency of cash transfer programs run by different implementers. While efforts are underway in the sector to bring greater harmonization to the definition of indirect, shared, and direct cost,⁴ at present the best feasible approach is to include all of those categories of costs so exclusion of ICR does not cause analysts to exclude in-country shared costs which happen to be funded by ICR at some agencies.

Limitation: Comparability of Analyses from Agencies with Core Funding

It can be difficult if not impossible to establish actual total costs of a program when certain aspects or functions of that program are supported through “core” funding. The larger a proportion of an organization’s costs are covered through unrestricted or core funding, the greater a problem this will be for cost-efficiency analysis. In most NGOs, unrestricted or non-project funding is minimal, and so most of those indirect costs end up charged to grants themselves. Even if donors disallow charging of certain items and they must be subsidized by unrestricted money, this is often traceable. Results from programs run by NGOs are therefore likely to be comparable, because the inclusion of ICR means that these costs are more or less uniformly included.

However, when project-based funding is supplemented by substantial core resources not reflected in the ICR, their cost-efficiency results stemming from this methodology would be an understatement of the true costs of delivery. Even more problematically, without additional information on the volume of unrestricted funding, it would be impossible to know how much of an understatement those figures were. While impacting all humanitarian partners to some degree, it is particularly challenging for United Nations Agencies and Red Cross and Red Crescent movement. For this reason, it may not be possible to identify the costs of these functions at UN or IFRC agencies, and cost-efficiency results from them should be treated as qualitatively different than those from agencies who cover the majority off costs from specific project awards.

! **Best Practice:** Include a proportion of the indirect costs as the final step in adding up your costs, because the proportion of ICR you include will depend on prior decisions about what direct or shared costs were necessary for the intervention you are studying.

For multi-output awards, this leaves the question of how to allocate the total ICR charged to one of the outputs among the several supported by that award. This is trickier than allocating direct or shared costs, because ICR typically funds cross-cutting functions at a global level which cannot reasonably be identified with one output or another. The best feasible approach is to use the proportion of all direct and shared costs attributable to the cash

⁴ The Norwegian Refugee Council’s “Money Where It Counts” initiative has documented the differences in allowable charging across donors and suggested common principles for the sector.

transfer output, among the entire program cost, to estimate a percentage allocation for ICR.

! **Best practice:** Calculate the proportion of ICR you will attribute to the intervention you are studying, based on the proportion of direct and shared expenses relevant for the intervention you are analyzing, out of the total expenses on that award. You should have identified the direct and share costs relevant for the intervention being analyzed in previous steps.

$$\text{ICR Allocation \%} = \frac{\text{Direct Costs of Intervention} + \text{Shared Costs Attributed to Intervention Total}}{\text{Direct + Shared Costs of Award}}$$

$$\text{Amount of ICR to Include} = \text{Total ICR Charged to Award} \times \text{ICR Allocation \%}$$

Non-Financial Costs: In addition to the financial costs of delivering basic needs interventions, there are a variety of non-financial and social costs which may be components of program delivery. This is not referring to cost sharing--where programs are financially supported by multiple awards--those funding sources should always be included among the costs of the program, as discussed above. Instead it is referring to costs which do not show up on any balance sheet, such as volunteer time to do community targeting exercises, or donated communal spaces for distributions.

! **Best practice:** It is beyond the scope of routine cost-efficiency to estimate the value of in-kind contributions, particularly local volunteer time since wages in emergency contexts are difficult to estimate. However, when such resources were used this should be clearly noted in descriptions of the cost-efficiency results so it can be understood by others using your results for decision-making (see page 18).

The exception, where the value of in-kind goods is both easier to estimate and more critical for cost-efficiency analysis, is where the assistance provided to beneficiaries was itself donated. For instance, a food assistance program receiving donated in-kind commodities from a host government while covering all other programming related costs (distribution, transportation, M&E, etc) should include the value of the commodities even though the official budget might not reflect this contribution. Because the value of goods or money transferred to beneficiary reflects the output of the program (see below), it is necessary to estimate the dollar (or GBP, or EUR) value of those goods.

! **Best practice:** If some of the goods provided to beneficiaries are donated in-kind, estimate the value of those goods using wholesale market prices at the time of program delivery. Commodity prices can be sourced through primary data collection or via available secondary data sources such as WFP Economic Explorer, FEWS NET, FFP's Quarterly Commodity Price Data, and host government outlets.

3. Aggregating costs

Depreciation of capital assets: Sometimes, funding for a grant or commercial contract will include the purchase of capital assets whose use value is not confined to the execution of that program--for instance, a new vehicle which will last many years and be used by many programs before it is discarded. In some accounting systems capital assets may be automatically depreciated according to an organizational policy, while others may charge the full purchase price to one program if the donor allows it. Given the relatively small proportion that capital assets form of most program costs, differences in depreciation methods across organizations are unlikely to drive significant differences in cost-efficiency results, and should not be a major concern. The primary concern is if the

cost of an asset is charged entirely to one program, when in fact its use value will extend over a longer period of time. When items are charged in their entirety to one program, even though the usable life will extend beyond the life of the program, the cost-efficiency analyst needs to make an additional assumption about depreciation of that asset so that only the relevant portion is included among the costs in the analysis.

! Best Practice: Where large capital assets (i.e. greater than 1 percent of the direct costs) are charged entirely to a single program, transparently state an assumption about the usable life of that asset and use straight-line depreciation (i.e. divide the cost by the usable life to get a per-year cost) and allocate only a portion of the cost of the asset to the program in question.

Currency Exchange: The majority of grants or commercial contracts which fund humanitarian response are denominated in the currency of donor countries--dollars, pounds, or euros. In some cases, particularly in countries with greater currency volatility, some portion of funding may also be paid in local currency, but this is usually minimal. In practice, the general ledger from which spending data is drawn will have a currency of record, and any expenses incurred in “local” currency will already have been exchanged into that currency of record using contemporaneous exchange rates at the time the expense was recorded in the accounting system. Attempting to unpick the exchange rate used for every individual transaction in the source data would be painstaking, and serve little purpose since small differences in exchange rates faced by different implementers in the same country at the same time would have minimal impact on cost-efficiency results. Rather, the relevant question is how to bring programs implemented by different agencies with funding from different donors (i.e. possibly denominated in different currencies) into a common format.

Applying an exchange rate to a total program cost or cost-per-output will yield the same result as applying the exchange rate for every item in the cost model, and so for simplicity’s sake we recommend exchanging into a common currency once the final cost estimate is reached. Any changes in exchange rates across years should be captured by adjustments for inflation (see below), and so different exchange rates for different years of spending within one program is not necessary. Finally, there is the question of which exchange rate to use for the adjustment. PPP exchange rates are not a solution to making program cost data comparable across contexts (for further discussion see Dhaliwal et al, 2012). PPP exchange rates make program costs appear significantly higher since they attempt to state costs in terms of US price levels, and so “standard” exchange rates are preferred.

! Best Practice: To get all programs’ results into a single currency, multiply the cost per output for each program times the average annual standard exchange rate (i.e. between the currency in which that programs expenses were recorded and your chosen currency), for the year of your analysis.

! Best Practice: If exchange rates fluctuate significantly during the year, to the point that implementers purchase inputs strategically to capitalize on low prices at certain times, it may be appropriate to use the exchange rate at the time of purchase rather than the annual average exchange rate. This will ensure that the purchasing power of the “dollars transferred” or the value of goods procured is more accurately captured.

Inflation: In addition to exchanging between currencies, price differences across years (i.e. inflation) is important to consider. When drawing data about actual expenses from financial databases, the data implicitly reflects the prices at the moment at which expenses were incurred. This presents two potential problems: differing price levels across time within a program (e.g. if a program ran for many years), and differing price levels across programs run at different times (e.g. one program implemented in 2009 and another implemented in 2015).

! **Best Practice:** When reporting cost efficiency results, clearly state the year of currency in which cost-per-output is reported. For simplicity's sake, we recommend using the base year of the program.

In practice, the opportunity for distorted comparisons because of price changes within the period of a single program's implementation is minimal. Firstly, this is because most humanitarian programs run only a short period of time--the median grant length at the IRC is less than one year, and prices don't change dramatically over that period of time. Secondly, because funding is typically denominated in relatively stable donor currencies, inflation could typically account for no more than 3 to 5 percent change in implicit prices across years.

! **Best Practice:** Unless program implementation lasts for more than 3 years, do not adjust for inflation within a given programs expenses across time. If a program lasts for more than 3 years, deflate annual total expenses for each year back to the price level of the base year using GDP deflator rates for the currency in which funding was given.

There is greater opportunity for distorted comparisons because of price changes across the time when different programs were implemented. For instance, if one cash program was run in 2009 and another was run in 2015, the prevailing wages for program staff could have increased significantly over that time, necessitating an increase in spending on cash delivery. If inflation is not adjusted for, the 2015 program might appear to be more expensive, when in fact the difference reflects only the purchase of identical inputs in different years. When creating comparisons across programs, analysts should therefore choose one year in whose currency to express all cost-efficiency results (a "year of analysis"), and inflate/deflate each program's cost-efficiency estimate.

! **Best Practice:** When creating comparisons across programs, choose a single "year of analysis" in which all programs' cost-efficiency results will be stated. Cost-efficiency estimates can be adjusted to reflect the prices of the year of analysis by inflating or deflating using average annual GDP deflator rates for the time elapsed between each program's base year and the year of analysis.

Discounting Cost Streams: To account for the opportunity cost of dedicating funding to a particular program, rather than letting that money appreciate and spending it in future years, cost streams over time are typically "discounted" back to the base year of the program using a standard discount rate. In practice, however, time discounting makes minimal difference in cost-efficiency results for humanitarian programs, which are typically of very short duration (see Dhaliwal et al, 2012 for more). It is only for programs with cost and benefit streams over long periods of time, such as climate change mitigation or infrastructure investments, that time discounting can substantially affect analysis results. If cost streams are discounted, in unusually long cash transfer programs, then a 10 percent discount rate is recommended (see Zhuang et al, 2007 for a discussion of discount rates).

! **Best Practice:** Unless program implementation lasts for more than 3 years, do not apply time discounting to cost streams. If a program lasts for more than 3 years, discount costs by applying a 10 percent discount rate for each annual total cost.

Transport for In-kind Assistance: In-kind assistance imported into a country comes with several additional costs such as ocean freight and inland transportation costs. While there is not a right or wrong way to accommodate for these costs during cost-efficiency analysis, it should be clear and transparent on whether these costs are considered as part of the numerator or denominator. This guidance recommends that costs associated with importation (e.g. ocean freight and inland transportation) are considered as part of the denominator or transfer value

(i.e. reflective of import price parity). The rationale for this is two fold:

1. It is anticipated that some level of cost-efficiency analysis was conducted as part of the response analysis and modality selection. Therefore selection of imported in-kind commodities was likely due partially to cost considerations (inclusive of importation costs) or lack of availability on local markets.
2. Cost of commercially imported goods available on local markets inherently reflect importation related costs in the final price point. Therefore local procurement, cash and/or voucher programs allowing households to access similar imported goods would already reflect the associated costs and would be similarly reflected as part of the denominator or transfer value.

4. Counting Outputs:

The question of counting the actual value of cash or vouchers to beneficiaries was taken up by the Tracking Cash & Vouchers group within the Grand Bargain Cash workstream, and their conclusions are relevant for cost-efficiency analysis.

! **Best practice:** Assistance distributed through cash versus assistance distributed through vouchers should be tracked separately. Given the common questions about the cost-efficiency of different delivery modalities, cash programs and vouchers programs--even if funded by the same award--should generally be analyzed as separate programs.

! **Best practice:** Where complementary services are paired with cash or voucher distribution, the value of these services should not be included in the value of “transfers” or as a delivery cost, but separated out entirely. Where common targeting methods were used for both the basic needs transfers and the complementary services, these should be included in the estimate of “delivery costs” to the extent that they were necessary for identification of transfer recipients. These complementary services should then be noted and described in the qualitative information about the program, so this information can be used when interpreting the program’s results.

The typical way of calculating cost-efficiency for cash or in-kind transfer programs is the “cost-transfer ratio”, which compares the full costs of delivery to the value of the cash or goods provided to beneficiaries. This metric has long been the standard in economic evaluations of social protection cash transfers (see Caldes, Coady, and Maluccio 2004), and provides a straightforward measure of the amount of resources needed to get 1 USD (or GBP, or EUR) of value into the hands of a beneficiary. Analysts should be able to observe this “output” count directly from your expense data, in the form of spending on transfers or in-kind goods which were distributed to beneficiaries. The exception is programs which purchase in-kind goods or food strategically throughout the year, where adjustment may be needed as discussed above. The value of transfers is subject to the same guidance about exchange rates and inflation rates, described above.

! **Best practice:** In addition to recording the total value of goods/transfers given by your program, also clearly record the number of people reached, over what time period, and the average value of goods/transfers they received. Checking that Transfer Value * # Beneficiaries * # Transfers/Beneficiary is equal to the total value of transfers you can see in expense data is a good quality check for your analysis. Information on the dollar value of transfers or vouchers is also important for interpreting the

results of the program, so that the purchasing power of the assistance can be understood in context.

Once you have identified the value of goods or cash given, you can separate this out from your other expenses to calculate the cost-transfer ratio:

$$(1) \text{Cost-Transfer Ratio (CTR)} = \frac{\text{Cost of Delivery}}{\text{Value of Goods/Transfers}} = \frac{\text{Total Cost} - \text{Value of Goods/Transfers}}{\text{Value of Goods/Transfers}}$$

This ratio expresses that for every dollar of value transferred to beneficiaries, this much was spent on delivery and support costs. However, some agencies also report the same information in a slightly different format:

$$(2) \text{"Total" Cost-Transfer Ratio} = \frac{\text{Cost of Delivery}}{\text{Total Cost}} = \frac{\text{Total Cost} - \text{Value of Goods/Transfer}}{\text{Total Cost}}$$

This latter ratio expresses that of every dollar of money spent on the program, this much was spent on delivery and support costs.

For the TCTR, the closer the ratio is to 1, the greater proportion of program costs went directly to beneficiaries in the form of transfers. While both equations contain the same information, the algebra is conducted slightly differently and so analysts must be extremely careful not to compare estimates arrived at with Equation (1) to estimates arrived at with Equation (2). Because Equation 1 is the standard in the academic literature on cash transfer programs, we recommend this as the default for reporting cost-efficiency results on basic needs programs.

 **Best practice:** Report cost-efficiency results based on the ratio of Delivery and Support Costs to Value of Transfers, i.e. Equation 1. In either case be extremely careful in labeling results, so that you are clear whether your CTR is per dollar of value transferred or per dollar of program funding.

INTERPRETATION

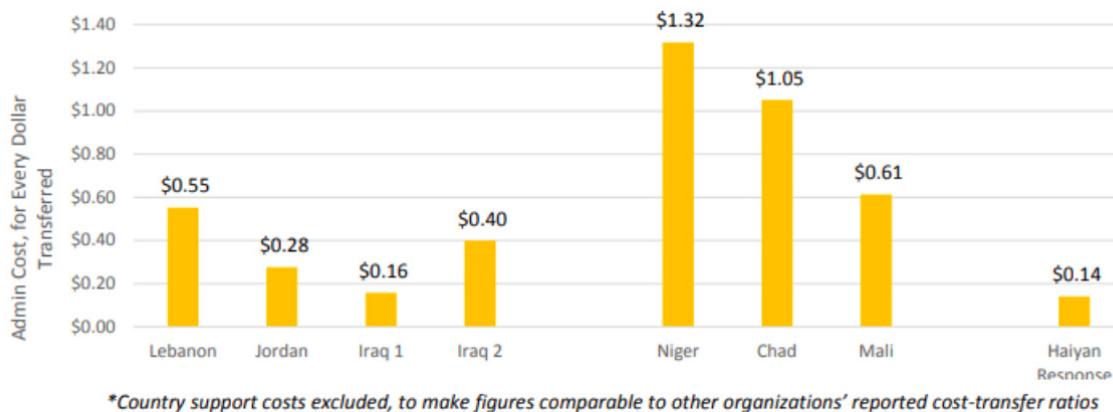
Understanding what drives differences in cost-efficiency: As discussed above, the point of comparative cost analysis is not that some analytical method will guarantee that your cost-efficiency estimate represents what that program would have cost if implemented in any context. This is simply impossible because of the differences in price levels, population needs, electronic banking infrastructure, among many other factors. Rather, the goal of comparative analysis is to understand what features are likely to drive differences in the cost-efficiency if programs are implemented differently or in different places.

In other words, it is not really a question of if program costs and outputs will change from one place to another--they will--but how much they will change and based on what factors. Based on evidence to date, there are a few key features which seem to drive cost-efficiency across programs, which will help one understand whether the average cost is likely to be higher or lower in a different setting versus the place the program was originally studied.

- **Price of Goods:** Price levels vary from country to country, in particular the price of goods such as workbooks, vehicles, venue rentals, etc. While it may be too difficult to figure out the exact price of every good in the place in which you're hoping to run a program, you can identify the top five inputs that make up most of your program cost and consider how much these prices might vary across contexts. The change in purchasing power is espe-

cially important for analysis of basic needs programs, because the output of such programs is also measured in USD/GBP/EUR, which implicitly reflects the price of goods that program beneficiaries might want to purchase.

Figure 5. Differences in Typical Cost-Efficiency by Price Level



Middle East
Avg. Transfer Size =
\$209 USD (2014)

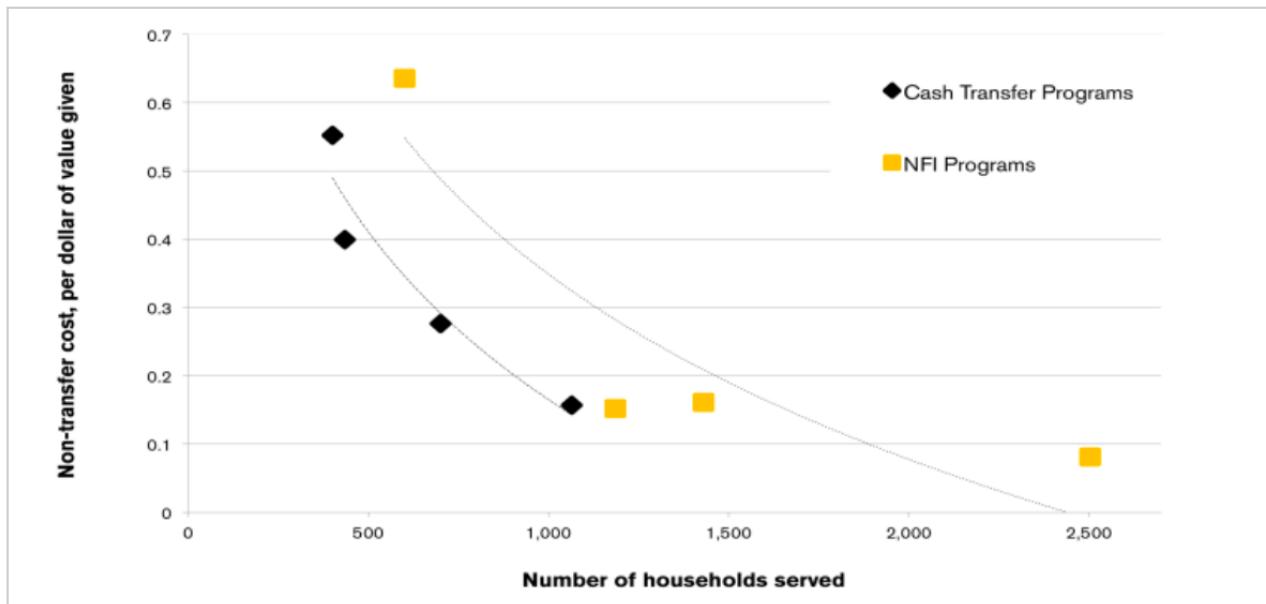
Sahel
Avg. Transfer Size =
\$72 USD (2014)

! **Best Practice:** Do not try to use comparative data from programs in contexts with dramatically different price levels. The differences in dollars delivered, in the denominator of your cost-efficiency equation, significantly influence the cost-transfer ratio so that programs from higher price level contexts always look more cost-efficient.

- **Price of Labor:** Price levels vary from country to country, and the price of labor (i.e. wages) is particularly important to consider. In some countries, especially post-conflict countries, the prices of skilled labor (e.g. master trainers, program managers) may be unusually high. In other countries, especially rapidly growing economies like India, the price of skilled labor may not be as high. While it may be too difficult to figure out the exact wages of every position necessary to run a program, you can identify the top five staff positions that make up most of your program cost and consider how much they might vary across contexts.
- **Implementing “Infrastructure”:** The costs of a program may depend on the existing capacity of the agency which implemented it, in the first place. In Pakistan, for instance, the IRC has been able to pre-position data on potential transfer recipients based on a national social safety net program. When a flood eventually affected that province, the IRC already had targeting data on hand, and did not need to run new targeting surveys to identify beneficiaries. On the other hand, in a rapid onset disaster where an agency has to set up an entirely new operational infrastructure to serve beneficiaries, this can drive up the cost per dollar transferred. When considering how the costs of a program may change, you need to consider what existing structures or capacities that program relied on in the context in which it was studied, and whether those are present in the new context you are considering. If they are not available, you may (1) conclude that the program is not feasible in that new context at the same cost-per-output, or (2) want to figure out how much it would cost to build that infrastructure, and include this in your assessment of value-for-money.
- **Program Scale:** The average cost of an intervention may change quite a lot when a program is implemented at

small scale versus at a large scale. This is because of the presence of start-up costs (e.g. negotiating a contract with a Hawala) or costs that must be incurred regardless of the scale of the program (e.g. a software license). When programs reach only hundreds of people in a few communities, these costs are spread over fewer beneficiaries, and the average cost per output delivered goes up. But when programs reach dozens of communities and thousands of beneficiaries, the cost per output can become much lower.⁵ Expecting a program run at a small scale to match the cost-efficiency of a comparator program run nationally is unrealistic.

Figure 6. Impact of Scale on Cost-Efficiency of Basic Needs Programs in Middle East

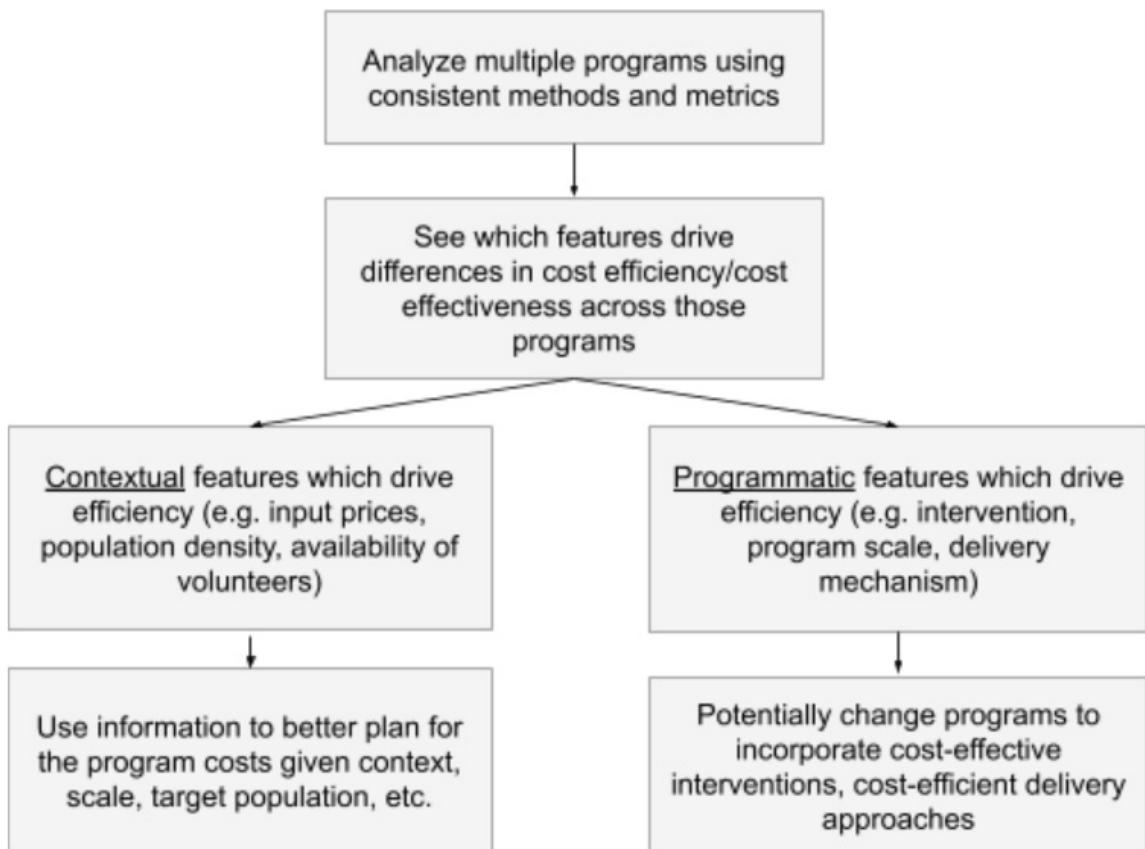


Learning from comparative data sets: How results from cost analyses are used is as important as how they are conducted; misapplication of the results about a single program, or a comparison of several programs, can undermine the usefulness of cost analyses. Finding that one program is more cost-efficient or cost-effective than others doesn't mean that approach is "the best" and should be replicated everywhere. Rather, the importance of cost analyses is in uncovering what characteristics of different programs, or contexts, drive the cost or improve value-for-money of basic needs programs. Knowing not just whether a program is cost-efficient, but why, is crucial for applying these insights well in future funding and design decisions.

Thus, while we have to apply consistent metrics and methods when conducting cost analyses, we should not be expecting to see consistent results across different programs in different contexts. As comparative cost analysis becomes more routine for basic needs programs, the first priority is to learn what features drive or constrain value for money. Sometimes the drivers will be contextual (e.g. low population density, presence of mobile money systems), and while they can't be helped, data on the implications of these contextual factors will help to plan and budget better. In other cases the drivers of value-for-money are changeable features of program design, in which case we have derived insights about how to improve our programs to maximize impact per dollar.

⁵ This is especially true when comparing programs which reach different proportions of people within a given catchment area. Because of fixed costs to operating in a particular area (e.g. monitoring visits transportation), targeting greater proportions of the population in a given area often improves cost-efficiency as those locally fixed costs are spread over more people.

Figure 7. Learning Pathways for Cost-Efficiency Analysis



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