

# COST-EFFECTIVENESS ANALYSIS OF CASH-BASED FOOD ASSISTANCE PROJECTS

## A case study and discussion paper of findings in Niger

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*August 2015*

*Despite recent and expanding literature on cost effectiveness and value for money, there is little by way of guidance for the implementation of cost-effectiveness analysis in humanitarian and development programming. This report distills findings from the literature on ex post cost-effectiveness analysis, and applies those findings to an analysis of Catholic Relief Services' (CRS) cash and voucher transfer projects focused on increasing food security in Niger. This analysis contributes to upcoming CRS guidance for projects on cost-efficient and -effective, cash-based programs.*

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# List of Abbreviations

CBA	cost-benefit analysis
CFW	cash for work
CRS	Catholic Relief Services
DFID	Department for International Development (UK)
IFPRI	International Food Policy Research Institute
Kg	kilogram
LRP	local and regional procurement
MIS	management information system
NGO	non-governmental organization
SVF	seed vouchers and fairs
MT	metric ton
USAID	United States Agency for International Development
VfM	value for money
VFW	vouchers-for-work
WFP	World Food Program

# Executive Summary

This case study explores cost-effectiveness analysis, and supports a larger objective to create guidance for improving both *ex ante* and *ex post* cost-effectiveness analysis across relief and development projects. The case study highlights how current information can be used to assess project cost effectiveness, and also what additional pieces of information could be used to improve CRS and partner agencies' understanding of effectiveness. This report differentiates between the terms *economy*, *efficiency*, and *effectiveness* in order to focus on cost-effectiveness; however, cost efficiency is also considered.

Much of the existing literature on the cost effectiveness of cash, voucher, and in-kind food assistance projects highlights the limitations of comparison. Gentilini (2007) warns that comparisons should only be made “under certain conditions”, as context, management, and objectives vary across projects. Meyer (2007) shares that “[h]idden costs, sloppy accounting, diverse budgeting formulas and other factors have limited our ability to accurately calculate and compare the costs of different strategies”; Bailey (2014) also points out that the “requirements for robust comparisons are high”.

This study presents four cash-based food assistance projects implemented by CRS in Niger, and analyzes them against seven indicators. These indicators represent a mix of cost-efficiency (cost per beneficiary) outputs, as well as proxies for social and economic impact, which specifically aim to ensure that the project is “doing no harm” to existing social and economic structures. When analyzed together across a matrix, they are intended to represent complementary aspects of “effectiveness”:

1. Cost per beneficiary
2. Transfer-to-budget ratio
3. Time to distribution
4. Community asset creation
5. Multiplier effect
6. Alignment with preferences
7. Intra-household concerns

The matrix approach allows CRS to explore multiple dimensions of each project, which gives a more complete picture of effectiveness. While each project may have its benefits, the conditional voucher project analyzed in this study was the most cost-effective cash-based food assistance project implemented by CRS in Niger in recent record. The conditional vouchers project's scale, asset-creation component, alignment with local preferences, and equity consideration all indicate that the project reached its objectives at minimum cost. Findings also indicate that the size of the project is a key driver of its efficiency.

# Introduction

Since CRS began working in Niger in 1991, the agency has implemented a wide variety of food security projects. Despite these efforts, chronic food insecurity coupled with climactic shocks and increasingly poor agricultural conditions in intervention areas requires that many projects are partially or entirely focused on transferring food, vouchers, or cash (for the purchase of food) to food-insecure households. Since 2010, CRS has implemented several cash-based food security projects in Tillabéri and Ouallam Departments in the Tillabéri Region. Given their life-saving nature, it is critical to ensure that all humanitarian and early recovery-focused projects are as cost efficient and effective as possible, in order to reach the most people. For this study, CRS chose four projects with comparable anticipated outcomes: Vouchers Offering Incentives to Communities during Emergency (VOICE); Bonbatu Plus (Bonbatu +), a follow-on from “Bonbatu” livelihoods program; Emergency Agriculture Recovery and Livelihoods Interventions in Niger (EARLI), and Assistance through the Distribution of Vouchers Aiding Nigerien Communities in Emergency (ADVANCE) projects. More details on these projects are listed in the Appendix.

Although there is recent and expanding literature on cost-effectiveness and value for money (VfM), there is little by way of guidance for the implementation of cost-effectiveness analysis in humanitarian and development programming. This report distills findings from the literature on *ex post* cost-effectiveness analysis, and applies the findings to an analysis of cash and voucher projects, specifically those focused on increasing food security in Niger.

This exploratory case study in cost-effectiveness analysis supports a larger objective of creating guidance for improving both *ex ante* and *ex post* cost-effectiveness analysis across CRS and partner agencies’ projects. The case study highlights how the information that is currently collected can be used to assess project cost effectiveness, and also what additional pieces of information could be useful to improve implementing agencies’ understanding of effectiveness. While this information will be mentioned briefly here, areas for improvement and recommendations on data collection will be discussed in the guidance document.

## Literature Review

### DEFINITIONS

For the purposes of this report, definitions will be based on those used in the Department for International Development (DFID) *Guidance on Measuring and Maximising VfM in Social Transfers* (White, Hodges, & Greenslade 2013) and their “3e’s framework”. The document clearly lays out the differences between economy, efficiency, and effectiveness. The following definitions are quoted from the DFID *Guidance*:

- **Economy** relates to the price at which inputs are purchased (consultants in design phase, targeting costs, management information systems, payment mechanisms, independent evaluations). Economy in procurement is important for in-kind transfer projects such as food distribution and school feeding, and for public works projects, but is still significant in ‘pure’ cash transfer projects, for example in purchasing a management information system (MIS), a delivery service or an impact evaluation.
- **Efficiency** relates to how well inputs are converted to the output of interest, which is transfers delivered to beneficiaries. Cost-efficiency analysis spans both economy and efficiency, focusing on the relationship between the costs of a social transfer project and the value of the transfers delivered to beneficiaries. Analysis of transfer projects has highlighted important cost-efficiency issues, which are discussed in detail in the literature review section.

- **Effectiveness** relates to how well outputs are converted to outcomes and impacts (e.g. reduction in poverty gap and inequality, improved nutrition, reduction in school drop-out, increased use of health services, asset accumulation by the poor, increased smallholder productivity, social cohesion). Cost-effectiveness analysis measures the cost of achieving intended project outcomes and impacts, and can compare the costs of alternative ways of producing the same or similar benefits. Cost-benefit analysis (CBA) is wider-ranging, quantifying in monetary terms as many of the economic costs and benefits of a project as feasible, including items for which the market does not provide a satisfactory measure of economic value.

## EX ANTE VERSUS EX POST ANALYSIS

Cost-effectiveness analysis can be used for two distinct purposes:

- Choosing between intervention modalities during project design (*ex ante*)
- Evaluating and comparing impact across interventions and/or countries (*ex post*)

For this report, guidance pertaining to *ex post* analysis will be considered. A more complete literature review, including expanded details of *ex post* analyses, is included in the accompanying cost-effectiveness guidance document.

## ACADEMIC AND POLICY LITERATURE

Practitioners may be familiar with recent work carried out by Lentz, Passarelli, & Barrett (2013) assessing the cost effectiveness of local and regional procurement (LRP) of food aid. With the exception of their timeliness analysis, which highlights the incredible savings of time required for LRP and cash, Lentz et al. primarily compare the efficiency of LRP, cash, and transoceanic food aid in terms of cost per metric ton (MT) of similar commodities. This comparison is arguably closer to a monetary cost-benefit analysis than a cost-effectiveness analysis. The authors find large cost per MT differences by modality for cereals, primarily due to the cost of shipping bulky commodities long distances. The cost savings of LRP largely disappear for processed products such as vegetable oil. It is worth noting that Lentz et al. went to great lengths to assure the comparability of commodities, but scale issues were largely ignored. The authors state that further savings could be expected when large local procurements were made in well-integrated markets, although they caution that poorly-integrated markets could see price increases as a result of large scale procurements. These increases would erode cost-savings and potentially hurt non-participants purchasing in local markets.

Ryckembusch et al. (2013) propose that the Omega Value – a ratio of in-kind nutrient value per dollar and voucher–purchased food nutrient value per dollar – can be used by programmers to decide between vouchers and in-kind food assistance. The Omega Value was developed by the World Food Program (WFP) to inform decisions between food aid and voucher programming; however, it has two main weaknesses which are recognized by the authors. First, the formula does not take intra-household distributional issues into account, which means that it tacitly assumes in-kind and voucher-procured food items are equitably shared among household members. Secondly, the formula cannot be used to choose between cash and voucher projects without strong assumptions about how cash will be used by the household.

Since it is unclear to what extent dollars spent on food, vouchers, or cash actually impact the food and nutrition security of transfer recipients, a practitioner would ideally be able to compare the impacts of these different types of interventions. Working with the International Food Policy Research Institute (IFPRI), WFP commissioned four randomized cash and food transfer interventions to do just that. In Niger, food transfers had larger, positive impacts on consumption and dietary quality; but cash recipients were more likely to invest in agriculture, which suggests that there may be a short- versus long-term tradeoff in food security impacts (Hoddinott, Sandström, & Upton, 2014). It is notable that cash was relatively more effective than in-kind food at improving dietary diversity in the three other study locations: Ecuador, Uganda, and Yemen. This analysis highlights the importance of evaluating impact indicators rather than programmatic outputs, and also asserts

that without repeated follow-up over many agricultural seasons, it may be difficult to understand the long-term food security impacts of various types of interventions.

In her literature review for DFID on VfM, Bailey (2014) determines that the “scale, size/frequency /duration of transfers, the delivery mechanism and whether cash substitutes for in-kind aid or adds another layer of assistance” are the factors primarily influencing the efficiency of interventions. The review identifies the main gaps of VfM, and concludes that there is a lack of practical tools for analyzing the efficiency and effectiveness of cash transfer projects, including projects in multi-sectoral programming contexts. It also concludes a lack of documented evidence on the economic impacts of transfers.

Much of the existing literature on cost-effectiveness of cash, voucher, and in-kind food assistance projects highlights the limitations of comparison. Gentilini (2007) warns that comparisons should only be made “under certain conditions”, as context, management, and objectives vary across projects. Meyer (2007) shares that “[h]idden costs, sloppy accounting, diverse budgeting formulas and other factors have limited our ability to accurately calculate and compare the costs of different strategies”; Bailey (2014) points out that the “requirements for robust comparisons are high.”

This study builds on the cost effectiveness for cash and voucher programming literature in order to analyze which factors influence cost effectiveness in projects like those implemented by CRS in Niger. It also highlights areas for improvement, if CRS and partners should wish to further develop their ability to measure cost-effectiveness across a wider range of programming.

## Niger Analysis

### INTERVENTIONS CHOSEN FOR ANALYSIS

Although CRS has implemented many cash and voucher projects in Niger in the past decade, CRS selected the projects in this analysis based on their capacity for direct comparison. A consultant working with two teams of CRS staff used the following criteria for this analysis.

- **Location.** CRS only considered projects in Tillabéri and Ouallam Departments in order to ensure that the cost of reaching more remote locations would not artificially inflate the cost in comparison to other projects. Note that this would not be necessary if disaggregated project costs were easily available, which allows a comparison of local implementation costs without confounding distance-related costs (such as fuel costs and staff per diem).
- **Donor.** CRS selected projects funded by the United States government to ensure conformity in accounting practices and full attribution of staff time and resources to the projects being assessed.
- **Modality.** This analysis compares cash and voucher projects, as previous studies largely show transoceanic food aid to be a much less cost-effective option. Cash and voucher distribution activities can be separated from asset-generation and livelihood recovery costs; therefore, cost reports disaggregated by activity make comparisons more reliable.

The following projects met the criteria for inclusion in this cost-effectiveness study: conditional vouchers in the VOICE project; unconditional and conditional cash transfers in the Bonbatu + project; unconditional and conditional cash transfers, and seed vouchers and fairs (SVF) in the EARLI project; and vouchers in the ADVANCE project. The projects were implemented successively between 2010 and 2014; they were all designed to meet either short-term or short- and medium-term food security needs of affected populations. Project goals and objectives can be found in the Appendix.

## COST-EFFICIENCY AND -EFFECTIVENESS INDICATORS

This study analyzes the four selected projects against seven indicators. CRS identified these indicators as a result of the extensive literature review summarized above, as well as interviews with experts and experienced staff on how they would characterize “effectiveness” in a cash- or market-based food assistance project. The resulting indicators represent a mix of cost-efficiency (cost per beneficiary) outputs, as well as proxies for social and economic impact, specifically aiming to ensure that the project is “doing no harm” to existing social and economic structures. The following matrix lists the seven selected indicators and the cost-efficiency or -effectiveness results for each project.

Figure 1. Cost-efficiency and cost-effectiveness indicators and results by project

Intervention type:	Vouchers for work	Cash	Cash & SVF	Voucher
Name of project:	VOICE	Bonbatu +	EARLI	ADVANCE
Duration of project	January 2011–September 2012	April 2014–October 2014	February 2012–February 2013	August 2010–October 2010
Number of beneficiary households	21,990	830	2,600	20,108
Project Costs	\$4,355,761	\$376,908	\$1,492,959	\$3,931,925
Cost per beneficiary (per 100 kg of millet)	\$7.97	\$19.28	\$17.81	\$8.47
Transfer-to-budget ratio	0.67	0.44	0.44	0.77
Time to distribution (in weeks)	N/A	N/A	N/A	N/A
Community asset creation	Yes	Yes	Yes	No
Multiplier effect	Low	Medium to High	High	Low
Alignment with preferences	High	Medium	High	High

Intra-household concerns	No	Yes	Yes	No
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## 1. COST PER BENEFICIARY

For each intervention, a CRS consultant calculated the “cost per beneficiary”, or the cost of delivering each sack of millet. First, the value of the cash or voucher is translated into its millet equivalent. This is accomplished by calculating the number of 100 kg sacks of millet that each household could have purchased with the cash or voucher transfer. This figure equals the size of the transfer (as a millet equivalent), given the local prices at the time of the transfer. By calculating the cost per beneficiary, researchers to prevent projects that distribute twice as much to each household (due to a longer project implementation period) from appearing twice as costly.

The consultant converted the entire (direct and indirect) project budget to Central African CFA francs (XOF), the local currency, given the exchange rate at the time of the project. The budget is divided by the number of beneficiaries, and then divided again by the transfer size (in 100 kg units, as described above) in order to calculate the cost per household per 100 kg. Based on existing demographic data, it is assumed that each household contains seven members, so dividing the cost per household per 100 kg by seven yields the cost per beneficiary per 100 kg.

As this analysis focuses on cash and voucher projects for the purpose of comparing these costs, the consultant removed the proportional share of the SVF costs from the EARLI project, so that the cost of the cash transfer component was comparable to the other projects.

**FINDING:** The two largest projects, VOICE and ADVANCE, had the lowest cost per beneficiary. This is presumably due to economies of scale in programming. The Bonbatu+ cash project, which has the smallest number of beneficiaries, is the most expensive; although, EARLI is also relatively small and nearly as expensive. While length of project implementation was not explicitly studied here, projects can benefit from economies of scale in size, as larger projects can save through large bulk purchases and staffing needs. Projects can also benefit from economies of scale in time, as longer projects may be able to negotiate better deals on commodity purchases, and also are less impacted by substantial project start-up costs than shorter projects.

**FURTHER CONSIDERATIONS:** There are many ways to calculate cost per beneficiary. While a simple calculation of direct costs per beneficiary may be useful in some cases, it makes sense to analyze the cost to *deliver a certain ration or dollar amount* per beneficiary for the sake of comparability. Activity-disaggregated cost reports would facilitate this analysis.

## 2. TRANSFER-TO-BUDGET RATIO

The transfer-to-budget ratio highlights what share of the budget went directly to the transfer. A number close to 1 implies that nearly the entire budget went to transfers, while a number under 0.5 means that less than half of the project cost was passed on to the beneficiaries as a transfer.

**FINDING:** In accordance with the cost per beneficiary findings, the large-scale ADVANCE and VOICE projects clearly passed on a larger share of their budgets directly to the beneficiaries. This is true even after acknowledging that the 0.44 ratio calculated for EARLI does not include the proportional cost of implementing the seed fair component. It is assumed, once again, that the ability of CRS’ Niger Office to pass on a larger share of the budget in some cases is due to savings (economies of scale) from implementing a larger project.

While the VOICE project has a lower cost per beneficiary overall, the ADVANCE project passed on a larger share of the budget to the beneficiaries. Presumably, this is because the VOICE project had to budget for the

asset creation tools and monitoring<sup>1</sup>. Thus, VOICE gains a slight advantage on cost per beneficiary due to the slightly larger number of beneficiaries by implementing a straight distribution; but ADVANCE is more efficient in passing value, at least in terms of immediate relief, onto beneficiaries.

Bonbatu +, a cash transfer project, was no more efficient than ADVANCE or VOICE. It is also worth noting that the Bonbatu + project reached many fewer beneficiaries than any other project included in this report. While there may have been some efficiency gains to cash, these were dwarfed by the project size. These findings should not be generalized to *any* cash project.

**FURTHER CONSIDERATIONS:** These transfer-to-budget ratios are powerful, as they accurately and empirically demonstrate the share of project dollars that make it directly to the hands of beneficiaries. However, there is often a budgetary tradeoff between maximizing transfers to project beneficiaries and implementing associated livelihood or asset protection type activities. While the benefits to transfers may be more apparent in the short term, the expected benefits of medium- to long-term, resilience-building activities should be identified clearly (see Section 4 on asset creation).

### 3. TIME TO DISTRIBUTION

Time to distribution refers to the number of weeks between donor approval of the award being and the beneficiaries receiving their transfer.

**FINDING:** Since this information was not universally available in project final reports, comparisons have not been made on this point.

**FURTHER CONSIDERATIONS:** Future projects should make sure to report on timeliness, particularly in final project documents which are often referenced when designing new activities. Once CRS collects data for several projects and countries, certain trends may become clear. Information on timeliness by donor, modality, or location would be helpful for programming and intervention selection purposes. Ultimately, a project cannot be considered “effective” if it arrives too late to be useful.

### 4. COMMUNITY ASSET CREATION

When comparing the efficiency or value of a project, it is important to compare the cost against the long-term benefits. While it may not make sense to focus on non-life- or asset-saving interventions in some cases, such as humanitarian emergencies, asset generation or rehabilitation activities should always be noted so that the true costs of an intervention can be understood. Asset-creation activities may be costlier, which equals a larger project budget for a similar transfer amount due to the cost of tools and building materials. These activities also come at an actual dollar cost—dollars which may be spent on life-saving transfers in the short term. Nonetheless, they often have positive medium- and long-term impacts on economic development (Green & Haines 2015) and social empowerment (Rubin 2000).

**FINDING:** While the ADVANCE project did not include a community asset creation component, the three other projects did. Given that the VOICE project has the lowest cost per beneficiary, the cost-effectiveness of the project is impressive in regard to short- and long-term objectives.

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<sup>1</sup> The VOICE project implemented a variety of community assets including land recuperation, planting, sand dune fixation, micro-dams construction, health facilities enclosure (fences or walls), and well-deepening. The tools purchased for the project included pickaxes and crowbars, hoes, shovels, compass markers, local land survey equipment, machetes, brick-making molds, and water barrels.

**FURTHER CONSIDERATIONS:** As mentioned above, activity-disaggregated cost reporting would facilitate the analysis of asset creation activity costs. Understanding the true impact of asset creation activities may be difficult to evaluate during or immediately after the project.

## 5. MULTIPLIER EFFECT

In business management, it is often useful to calculate the share of expenditures that will stay within the local economy. While it is typically impractical (or impossible, given the current state of data collection) for aid workers to calculate the multiplier effect, it is useful to think about how the variables will be impacted by the choice of intervention.

The income multiplier (M) is calculated as follows: given the share of the cash/voucher that beneficiaries will spend (X), the share of what they spend that they are likely to spend in the local area (Y), and the share of local spending that is likely to stay in the local economy (Z).

$$M = \frac{1}{1 - XYZ}$$

Some broad assumptions about cash and voucher projects may not be defensible when comparing across two cash projects, but are instructive when trying to compare two different modalities.

Figure 2. Multiplier effect example

Note: the following percentages are used for illustrative purposes.

Practitioners should assume that households choose to save 20 percent of the cash they receive through cash projects, or use it to repay debt. Practitioners should also assume that all of the cash beneficiary households do spend will be spent in the local economy (at the local market). Given that many of the items on the local market come from outside the village, only one third of the income remains in the local economy. For voucher projects, 100 percent of the voucher is spent and spent locally, but the vast majority of the voucher value (90 percent) leaves the local economy when the grain merchants leave after the voucher fair.

$$M_{CASH} = \frac{1}{1 - (.8)(1)(.33)} = 1.36 \text{ \& } M_{VOUCHER} = \frac{1}{1 - (1)(1)(.1)} = 1.11$$

In this scenario, cash is likely to have a stronger multiplier effect than vouchers, or  $M_{CASH} > M_{VOUCHERS}$ .

**FINDING:** In the projects from Niger, food voucher demand is met by larger traders rather than by local vendors. It is easy to see that cash will have a higher local income multiplier effect than vouchers, assuming that more than a quarter of the cash is actually spent. There are reports that in Bonbatu+ cash was used to repay debts. Debt repayment would decrease the local multiplier effect (as compared to cash used for local purchases) if the lender returns the loan to their savings. Without further information on the use of repayments by lenders, Bonbatu +'s multiplier effect is classified as medium to high.

**FURTHER CONSIDERATIONS:** Assumptions about the benefits of cash can sometimes be misleading. For example, in order to further develop the debt repayment discussion, imagine that three quarters of the cash in the case above was used to repay debts rather than to purchase local commodities. If the lender chose not to issue any new loans or to spend any additional cash locally (above what she would have spent anyway), the cash income multiplier would plummet to below the voucher value.

Survey questions could be used to improve our understanding of the multiplier effect of transfers. While it is probable that cash transfer will have a larger multiplier effect than vouchers in general, this is primarily because staple vendors travel great distances to sell their products during voucher fairs in Niger, taking much of the voucher value with them when they leave. Implementing more flexible vouchers, mixed voucher-cash

projects, and encouraging the participation of local producers and small vendors could increase the multiplier effect of voucher programming.

## 6. ALIGNMENT WITH PREFERENCES

At the highest level, alignment with preferences relates to whether or not a project uses the modality preferred by beneficiaries. If beneficiaries express a preference for food, the principle of alignment with preferences requires that the project uses food commodities the beneficiaries would prefer to receive. To the extent possible, data on gender-disaggregated preferences should be collected and used to understand some of the gendered impacts of transfer programming and inform modality selection decisions.

**FINDING:** In general, beneficiaries stated that they appreciated the modality CRS used and the ability to select preferred commodities. Beneficiaries from the VOICE project specifically enjoyed that the food voucher was flexible while still assuring food consumption.

**FURTHER CONSIDERATIONS:** Many projects and organizations have found that beneficiaries state a preference for either the type of project they have seen before or the type of project they expect to see implemented. However, current humanitarian and development survey methods are often inadequate to truly understand beneficiary preferences. Games, an experimental solicitation technique, and surveys can be used with beneficiaries prior to project implementation to solicit their willingness to pay (see Breidert, Hahsler & Reutterer 2006) or gauge “revealed preferences” for receiving specific interventions, modalities, and food items. Project staff should also be mindful of seasonal impacts on preferences when implementing surveys or games much before or after project implementation, as changes in relative food prices may alter beneficiaries’ preferences over the course of the year.

Indebtedness is common in developing countries, particularly those with poorly functioning finance systems. Debt may cause beneficiaries to prefer vouchers or food over cash, as seen in VOICE (discussed above). Indebtedness and other beneficiary preference concerns are discussed in greater detail in the Humanitarian Practice Network’s (HPN) *Good Practice Review* on cash transfer programming in emergencies (Harvey & Bailey 2011).

Finally, in some contexts, preferences may vary systematically with gender, age, ethnicity, or other factors. Practitioners should take care to use information-gathering techniques that enable staff to understand the preferences of different demographic groups.

## 7. INTRA-HOUSEHOLD CONCERNS

Current data collection processes make it difficult to assess whether projects are benefitting all household members equitably and how transfers interact with preexisting gendered vulnerabilities and preferences. Without information on individual-level consumption and behavior, practitioners use household exit interviews or cash-use surveys to understand how resources are being spent and how transfers impact the bargaining power and time use of different household members. While practitioners cannot be sure that food items are equitably distributed among all household members, NGOs often assume that increased food consumption will benefit everyone, although this may not be true: cash resources may disproportionately benefit the household head, or be used for investments and temptation goods rather than increased food consumption.

**FINDING:** There is a lack of detailed data from the assessed projects on this issue. A recent World Bank working paper (Evans & Popova 2014) finds little evidence that cash transfers lead to increased spending on so called “temptation goods” such as cigarettes and alcohol. It is more likely that cash transfers will be spent on livelihood activities, and therefore, may decrease total resources available for food consumption when compared to vouchers. This issue requires further investigation.

**FURTHER CONSIDERATIONS:** Detailed household surveys that measure individual-level consumption of food and non-food items shed light on important issues of intra-household allocation of transfer resources.

Researchers can use single-sex focus groups prior to implementation to understand if there are any gender-specific concerns about certain modalities or transfers. While individual-level surveys can be time consuming and expensive to implement, agencies might consider using mixed-methods approaches (quantitative and qualitative assessments) to understand intra-household consumption in a small set of sample households.

Projects that provide transfers to women may increase their bargaining power; although, this is an empirical hypothesis that may vary substantially by context. Conditional transfer projects, particularly those targeted at women, may require great amounts of time, taking recipients away from other duties. Projects concerned with intra-household bargaining and gender-based violence should explicitly collect data on these questions with guidance from a gender specialist.

## Conclusions

The matrix approach allows CRS to explore multiple dimensions of each project, which gives a more complete picture of effectiveness. While each project has unique benefits, it appears that the VOICE project was the most cost-effective transfer project implemented by CRS in Niger in recent record. The scale of the project, asset-creation component, alignment with local preferences, and equity consideration all indicate that the project reached its objectives at minimum cost.

While findings indicate that the size of the VOICE project is a key driver of its efficiency, a complete assessment of the institutional capacity that is necessary for agencies to carry out different types of transfer projects is beyond the scope of this review. Organizations more experienced with cash programming, and less experienced with vouchers, than CRS and other partners might perform differently across voucher and cash projects in regard to efficiency.

As this report makes clear, humanitarian actors currently collect a limited amount of comparable data on project impacts. While project managers can currently assess the cost-effectiveness in terms of meeting short-term needs via transfers, the longer-term impacts of the projects are not being compared. Differences in cost accounting across donors also make comparing cost-effectiveness of projects funded by different donors impossible.

While this report focuses on the monetary costs of implementing different projects in Niger, country projects should consider other types of costs when choosing transfer modalities. Although they are difficult to monetize, agencies should consider factors such as environmental impacts, creation of localized social tensions, negative spillovers with respect to gender relations, etc., as they select transfer modalities.

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## Appendix

VOICE	Bonbatu +	EARLI	ADVANCE
<p><b>Goal:</b> Improve food security in highly vulnerable households affected by the 2010 production deficit in chronically food deficit departments in the Tillabéri and Zinder Regions.</p> <p><b>Objective 1:</b> Ensure adequate availability of food to 21,000 vulnerable households affected by the 2010 production deficit.</p> <p><b>Objective 2:</b> Restore and protect livelihoods and natural resources through VFW activities.</p>	<p><b>Goal:</b> Restore livelihoods of vulnerable households and communities habitually affected by crises; strengthen their capacity to resist future shocks in the Tillabéri region of Niger.</p> <p><b>Objective:</b> Ensure vulnerable households have supplemented household income through cash grants and cash-for-work (CFW) activities.</p>	<p><b>Goal:</b> Ensure vulnerable populations in the Tillabéri Region (Tillabéri and Ouallam Departments) have improved ability to cope with the food crisis and become more resilient to future shocks.</p> <p><b>Objective 1:</b> Restore livelihoods of 7,000 households; increase their resilience to future shocks through seed system programming; enable improved crop production.</p> <p><b>Objective 2:</b> Improve food security for 2,600 households and restore beneficiaries' land through CFW activities and cash grants benefiting the local community.</p>	<p><b>Goal:</b> Improve food security for highly vulnerable populations in Tillabéri and Ouallam.</p> <p><b>Objective 1:</b> Reduce the impacts of food insecurity on 20,108 highly vulnerable households.</p> <p><b>Objective 2:</b> Procure food aid faster through vouchers than imported food aid.</p>