

# The Revival of the “Cash versus Food” Debate

## New Evidence for an Old Quandary?

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## Abstract

The longstanding “cash versus food” debate has received renewed attention in both research and practice. This paper reviews key issues shaping the debate and presents new evidence from randomized and quasi-experimental evaluations that deliberately compare cash and in-kind food transfers in ten developing countries. Findings show that relative effectiveness cannot be generalized: although

some differences emerge in terms of food consumption and dietary diversity, average impacts tend to depend on context, specific objectives, and their measurement. Costs for cash transfers and vouchers tend to be significantly lower relative to in-kind food. Yet the consistency and robustness of methods for efficiency analyses varies greatly.

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New Evidence for an Old Quandary?**

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## Introduction

There is little doubt that cash transfers are amongst the most rigorously-evaluated interventions in development.<sup>1</sup> The basic question that this paper addresses, however, is not whether cash transfers work in general, but whether and why they do so relative to in-kind food assistance. Indeed, the cash *versus* food debate is among the most longstanding, controversial, and polarizing social protection quandaries. Consider the following quotes:

[T]he big reason poor people are poor is because they don't have enough money, and it shouldn't come as a huge surprise that giving them money is a great way to reduce that problem – considerably more cost-effectively than paternalism [i.e. vouchers and in-kind transfers]. So let's abandon the huge welfare bureaucracy and just give money to those we should help out. (Kenny 2013)

[T]housands of economics professors across the globe persuade millions of undergraduates that granting the poor distribution of benefits in-kind is less “efficient” than simply transferring to them cash (...). The economist's traditional, normative dictum on benefits in-kind may be analytically elegant (...) but practically dead wrong. (Reinhardt 2013)

These excerpts seem to posit two irreconcilable perspectives. But is there some trust in both? What does the cross-country evidence and experience tell us about transfers' relative performance? Until recently, a key limiting factor in informing the debate has been the paucity of robust *comparative* evidence.<sup>1</sup> As a result, the discussion on transfer selection has been largely based on inference—that is, based on findings from programs implemented in diverse contexts, relying on different evaluation methods, or designed for differing purposes. Such extrapolation and comparison of findings could, at best, be suggestive of relative effectiveness.

This paper reviews key findings emerging from a new generation of robust impact evaluations in ten developing countries, namely Bangladesh, Cambodia, the Democratic Republic of Congo, Ecuador, Ethiopia, Mexico, Niger, Sri Lanka, Uganda, and Yemen. These studies compare cash and food transfers under the same circumstances through randomized controlled trials (RCTs), quasi-experimental methods, or regression analysis. The paper, which frames and discusses emerging results within the broader issues that shape transfer selection debates, argues that the debate involves a range of factors that makes it more complex than often assumed. Moreover, it shows that, in terms of effectiveness, there seems to be no systematic dominance of one transfer over the other, and that a number of information gaps persist. Overall, the paper argues that transfer selection may deserve further attention on a par with other program design features such as choices around conditionality and targeting methods.

The analysis is conducted within certain parameters. First, the note examines the transfer debate within the universe of safety net programs, including interventions such as conditional cash transfers, school feeding, public works, or social pensions. In those programs, the size of transfers is generally devised to enable access to food and meet some essential needs. According to survey data from 69 countries, the average size of safety net transfers is about 23 percent of the poor's income or consumption (World Bank 2014). Therefore, the vast body of literature on “cash

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<sup>1</sup> See, for example, Andrew et al. (2014), Blattman and Niehaus (2014), Ozler (2013), Davis et al. (2012), and Independent Evaluation Group (2011).

grants”—which involve relatively large sums of money to jump-start entrepreneurship and investment—go beyond the scope of this paper. Similarly, in-kind transfers may encompass a vast array of items such as shelter, agricultural inputs, and subsidized health care. Yet we only consider a subset of those transfers, namely food commodities; as such, we use the terms “in-kind” and “food” interchangeably. Also, we regard food as a tout-court transfer, while de facto food rations often include a bundle of commodities of various monetary and nutritional values.

The remainder of the paper is organized as follows: the next section sets out a framework examining key areas that influence transfer selection debates. The subsequent section describes the compilation of evaluations and sets out their results. The next section provides a discussion of the implications from the analysis, while the last section concludes.

### **Anatomy of the Debate**

The issue of transfer selection is relevant under a range of poverty-reduction debates, but it is particularly compelling for issues around food security. The role of social protection in food security is being increasingly examined, including through the lens of its three core pillars: how social protection can enhance food production and agricultural productivity (Tirivayi et al. 2013); how transfers can provide access to food (CFS 2012); and how social protection can, as Alderman (2014) put it, be more nutrition-sensitive. A fourth food security pillar, risk or stability, underpins those three dimensions and it is central to the connections between social protection and resilience (Davies et al. 2013). The interactions between social protection transfers and the abovementioned food security components are mediated by a range of other factors (e.g., food security being only one factor in the nutrition equation), and occur under different timeframes (e.g., the likely timeframe for reducing malnutrition is measured more in terms of a generation, rather than of a few years).

Three forms of transfers are considered in this paper, namely cash, food, and vouchers. Cash transfers provide people with money, while food transfers (or food aid) include the distribution of commodities. Food transfers can be procured internationally (imported food) or local-sourced in the same country where the program is implemented. Vouchers are also known as stamps or near-cash transfers and can be used in predetermined locations, including selected shops, supermarkets, retail stores and fairs. Vouchers take two forms: on one hand, “value-based” vouchers provide access to commodities for a given monetary amount; on the other hand, vouchers can be “commodity-based”, or tied to a pre-defined quantity of given foods. Therefore, vouchers are a hybrid form of transfer that display features of both cash (value-based vouchers allow for some level of choice, although this is limited to the commodities available in the chosen location) and in-kind food (the implementation of commodity-based vouchers can closely resemble that of public food distributions systems).<sup>2</sup> Cash transfers can be considered the modality that provides beneficiaries (consumers) with largest choice while at the same time stimulating local markets. Also, vouchers can equally bolster local (food) markets, although the choice they provide is more restricted or none.<sup>3</sup> Food transfers provide no choice, but can stimulate markets if procured locally, although at a different level than vouchers: indeed, the former tend to entail the engagement of a more limited number of upstream, larger producers, while the latter would directly involve a larger number of downstream, smaller actors.<sup>4</sup> From this perspective, vouchers are more “local” in nature. Against this background, the remainder of the section briefly discusses a set of issues in the spheres of theory, political economy, and technical matters that will be useful when discussing the evaluations in the following section.

### *Theory and Political Economy*

The microeconomic foundations of the debate tend to draw from neoclassical theory as laid out by Southworth (1945). The transfer debate received considerable empirical attention in the 1980s and mid-1990s, including the production of a vast body of literature examining the United States' Supplemental Nutrition Assistance Program (SNAP; Basu 1996; Faminow 1995; Fraker et al. 1995; Devaney and Moffitt 1991; Levedahl 1991; Coate 1989; Blackorby and Donaldson 1988).<sup>5,6</sup> Interestingly, an empirical regularity in the literature seems to be the presence of a “cash-out puzzle” rejecting the neoclassical hypothesis—that is, “inframarginal” cash and food transfers should hypothetically have an equal effect on food consumption.<sup>2</sup> Indeed, “... virtually every study finds food stamps increase household nutrient availability at 2 to 10 times the rate of a like value of cash income,” (Barrett 2002). While there seems to be an overall difference in outcomes between cash and in-kind transfers, there remains great dispute as to why such difference persists.<sup>3</sup>

The transfer debate is not new. Historians found accounts of the quandary in 17<sup>th</sup> Century England, and even in ancient Edessa around 124 BC (Lindert 2005; Garnsey 1988). More recently, from the late-1990s and mid-2000s, the emergence of cash transfers on the global stage was in part defined by mounting criticism over the international food aid system, particularly in terms of transoceanic shipments and local monetization of commodities (Barrett and Maxwell 2006, 2005; Clay 2006; OECD 2005). Since the mid-2000s, the growing application of technology to the delivery has further propelled interest in cash as an efficient way of providing assistance (Vincent and Cull 2011).

While the global food aid model has evolved dramatically toward more targeted, technology-supported, locally-procured and nutritionally-sound commodities, some lingering perceptions around food transfers seem hard to fully dispel.<sup>7</sup> In part, the mixed performance of large-scale national public food distribution systems may have contributed to a view of food as an intrinsically second-best modality (GoI 2005). A related political dimension is that an appearance of a linkage to food may be attractive not only to taxpayers, but also with food producers and possible lobbies.

Also, in some contexts food transfers may still evoke the image of long truck convoys pouring onto famine-stricken areas, or of forces behind food distributions driven by commercial and geopolitical interests. More subtly, in-kind food may be somewhat more directly associated with the inability of countries or households to feed themselves, hence swiftly juxtaposing the issue of food provision with that of personal dignity. Instead, cash transfers tend to conjure just the opposite—images of freedom and independence—even if they are supposed to play the exact same role as food transfers (e.g., providing access to food).

The latter observation raises perhaps the most fundamental philosophical dilemma in the debate, namely the trade-off between providing choice and ensuring (as much as possible) a positive externality. On one hand, a recurrent view of in-kind transfers considers them as inherently paternalistic. From such a standpoint, the arguments in favor of in-kind transfers revolve

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<sup>2</sup> An in-kind transfer is defined as extramarginal (or inframarginal) when it is larger (smaller) than what households would have normally consumed in the absence of the transfer. When extramarginal, the theory predicts that, under certain conditions, in-kind transfers would be more effective in augmenting food consumption than an equal cash transfer.

<sup>3</sup> Explanations include, among others, a “labeling” effect inducing a sense of moral obligation to use in-kind transfers for their intended food consumption purpose (Senauer and Young 1986); the role of gender and decision-making behaviors in multi-adult households (Breunig and Dasgupta 2005); or alterations in household budgeting and planning of monthly purchases induced by in-kind transfers (Wilde and Ranney 1996).

around an “over-provision” of goods (i.e., extramarginal transfers). This involves informational, principal-agent, or behavioral arguments that often provide the foundations for much of the debate around conditionalities (Fiszbein and Schady 2009). In broad terms, this suggests that the expected externalities of an in-kind transfer would be desirable when there is a private under-investment—say, in food consumption or nutrition—below an optimal social (or even private) level. On the other hand, the provision of in-kind transfers represents a vehicle to influence behaviors (e.g., consumption patterns). To some extent, paternalism can less judgmentally be considered an approach to address externalities in health, or the fact that parents make decisions for children (thus their welfare may be discounted), or the parents are misinformed about nutritional benefits (Das et al. 2005). Under this view, changing consumption via prices or modified preferences is a motivation for in-kind programs.<sup>4</sup> Shifting gender control is a subset of this motivation. On the other hand, in-kind transfers do not allow people to maximize their utility through choice, that is, the magic of cash lies in its fungibility. Also, cash helps shift the balance of power. As Devarajan (2013) states, “... cash transfers have the potential to shift not just poverty-reducing policies but also the balance of power between government and its citizens, in favor of the latter.”

In other words, the mainstream argument in favor of cash is straightforward: cash provides choice and transfers power, hence making them “redefinitional”.<sup>8</sup> This is an undisputable advantage, though it needs some qualifications: can the provision of choice be considered an objective per se? In that case, any cash transfer can be considered “effective” and would not require evaluations. Or would the same effect be achieved through in-kind transfers? An inframarginal in-kind transfer has the same income-transfer effect. As such it can free up disposable income. And can choice be exercised effectively when there are limited supplies of goods or they are unaffordable? This is intimately linked to technical issues around market functionality, which will be discussed in the next section. Finally, an enlarged definition of “choice” may include the ability to choose what to receive in the first place. If the poor know best what they prefer, then they should be provided with choice on what to get (e.g., cash or food), not only on how to use a given transfer (i.e., cash). For example, in 2006 a combined cash and food transfer program was implemented in rural Malawi. The follow-up evaluation explored participants’ preferences over one or both transfers and found that “... most beneficiaries were very satisfied with receiving both food and cash,” (Devereux 2008). Yet the redesign of the project in 2007 included only cash transfers. The point here is the need for a broader notion of “paternalism”—that is, one that is not associated with a given transfer modality, but instead based on the extent to which interventions involve and engage beneficiaries as key stakeholders throughout the life of the program.

Ultimately, the tension between fungibility and paternalism seems ingrained in political economy and philosophical debates that go beyond the choice of transfers (Pritchett 2012, 2005; Lopez-Rodriguez 2011; Currie and Gahvari 2008). They nevertheless affect it significantly, including through factors such as the contextual definition of what poor people “deserve”, the preferences expressed in a given polity and social contract, public perceptions as rooted in historical precedents, the influence of particular constituencies, and to some extent even the symbolic value carried by food in societies.

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<sup>4</sup> The political economy and distributional aspects of the debate were indirectly captured by James Tobin in his 1970 Henry Simons Lecture at the University of Chicago. Indeed, while Tobin proposed large-scale means tested cash transfers to reduce poverty without interfering with the market determination of relative prices, he also wished to pair these with “non-market egalitarian distributions of commodities essential to life and citizenship” such as food stamps and other measures.

### *Factors Affecting Choices*

The available transfer literature can be grouped, in addition to the earlier SNAP studies, into five broad “empirical buckets”. First, there is high-quality research conducted on individual cash-based programs (Evans et al. 2014; Baird et al. 2013; de Brauw et al. 2012; Barham and Maluccio 2008; Duflo 2003). Second, there are comprehensive reviews focusing on cash transfers, often in relation to sectors, themes, and regions (Alderman 2014; Adato and Basset 2013; Davis 2013; Bailey and Harvey 2011; DFID 2011; Garcia and Moore 2011; Fiszbein and Schady 2009). Those two threads of literature are mirrored on the food front: in-kind food transfers have been carefully examined empirically (Kazianga et al. 2014; Singh and Dercon 2012; Hoddinott et al. 2012; Adelman et al. 2008a, 2008b; Gilligan and Hoddinott 2007; Yamano et al. 2005; Del Ninno and Dorosh 2003; Quisumbing 2003), as well as being subject of cross-country reviews and meta-analyses (Alderman and Bundy 2012; Webb et al. 2011; Del Ninno et al. 2007; Rogers and Coates 2002). Finally, publications have documented and summarized evidence emerging from all those four sets of studies (Lentz al. 2013; Gentilini 2007).

While recalling the general caveats on comparability, those studies have generally concluded that transfer appropriateness is context-specific and hinges on multiple factors. These include program objectives, the functioning of markets, administrative capacity, seasonality, security, intra-household preferences, and community dynamics. These factors largely shape the performance of transfers across time and space.

Turning “needs” into “effective demand” is a key rationale for cash transfers. Yet this might be challenging in the presence of weakly integrated and competitive markets. In those contexts, price transmissions would not necessarily signal relative scarcities, and localized cash injections may result in price spikes leaving consumers or net buyers worse off.<sup>9</sup> Ensuring that markets would respond to an increase in effective demand is key to ensure that purchasing power is maintained and local multipliers enabled. From this perspective, a basic level of market functioning is a prerequisite for the effective provision of cash transfers.<sup>10</sup>

The discussion on market analysis has important practical implications for program design, implementation, and efficiency. In some cases, prices may be particularly volatile, with a certain degree of unpredictability in future trajectories. These could turn a program that was efficient in the design stage into a cost-inefficient program during implementation. Indeed, keeping purchasing power constant in the wake of sharp and protracted price increases may escalate costs due to extensive use of contingency funds, such as shown in Zambia (Harvey and Savage 2006).

Price dynamics also have an influence on beneficiaries’ preferences, which tend to lean towards in-kind transfers when prices are higher.<sup>11</sup> This was clearly documented in the case of Ethiopia during the sudden increase in wheat prices in 2008 (Sabates-Wheeler and Devereux 2010). While it is difficult to generalize people’s preferences for a certain transfer modality, some general patterns can be discerned. As a natural consequence of price fluctuations, the preference for cash, vouchers, or in-kind food aid can vary by season. Yet gender also matters, and it is a generally observed pattern that women spend resources differently from men (Doss 2013). In a number of societies, however, women tend to prefer food, which they are more likely to control, while men may prefer cash transfers. However, anecdotal evidence shows that beyond the fact of who receives the transfer, the process of intrahousehold decision making also counts (e.g., men and women deciding in concert how to use household resources, even in contexts where women may be constrained in reaching markets, or face risks to access them, such as in refugee camps). As such, intra-household and gender-specific preferences are more complex and dynamic than often assumed. For instance, very few studies support the unitary model of household behavior,



and even fewer, if any, are experimenting with the differential impacts (e.g., on nutrition) of cash versus food transfers as provided to men and women (Braido et al. 2012).

New research is also shedding light on the intra-community effects of transfers, some of which are positive and empowering, while others generate undesired consequences in terms of social relations. For example, in Zimbabwe it was observed that, unlike food, cash transfers were not shared within the community, thus hindering informal mutual support and risk management mechanisms among members (MacAuslan and Riemenschneider 2011).

Returning to the issue of price trends and real value, predictable price seasonality has been recognized as one of the key drivers of food insecurity in Africa. For example, in Malawi analysis on price trends over 20 years show mean inter-seasonal price fluctuations in the order of 60 percent (Ellis and Manda 2012). There are various emerging options to deal with marked seasonal price fluctuations; one way is index-linking cash transfers to food prices, such as in the DECT program in Malawi. In that context, the approach “.... protected household food security until prices started falling just before the next harvest, [although] it required a degree of administrative and budgetary flexibility that is inconceivable for most governments and donor agencies,” (Devereux 2012). Another option is to deliver transfers half in cash and half in food. For example, in Swaziland a program was designed in 2007/08 where people were given a half ration of food (maize, beans, and oil) plus the equivalent in cash, each month for 6 months from November 2007 until the harvest of April 2008 (Devereux and Jere 2008). A third alternative is the distribution of cash and food transfers by season, with food provided in the lean season and cash immediately after the harvest. That approach, for example, is implemented under the PSNP in Ethiopia. This is likely to have a number of advantages, although it may also entail considerable analytical planning and logistical coordination among modalities.

More generally, cost-efficiency is one of the key factors that favor adopting cash-based transfers. Studies assessing relative costs showed that they tend to be higher for food transfers than for cash transfers and vouchers. This is not surprising, given the logistics that food programs normally entail (e.g., transport, storage, handling, etc.). Yet cost assessments seem not to adopt the same standard of rigor as impact assessments. Indeed, there are limited comprehensive protocols on cost analysis, with comparisons often being hampered by the lack of consistency and clarity around data quality, estimation strategies, and cost structures.<sup>12</sup> For example, a review of 27 programs showed that administrative costs for cash transfers and vouchers vary from 3 to 37 percent of total cost (Meyer 2007). Clearly, such a range may have as much to do with different formulas and accounting methods as real differences in cost. Furthermore, a frequent practice in the literature is to convert the cost of food commodities based on market prices at the retail level (upon which the size of cash transfers are often determined). This may significantly overestimate food costs, as they ignore the economies of scale from procuring large quantities of commodities at the producer-level. Preliminary calculations for a sample of countries have shown that those cost differentials could even offset the larger logistics costs of food programs, making in-kind transfers surprisingly more efficient than cash transfer programs. For example, Creti (2011) estimated that in the West Bank and Gaza, the costs for vouchers would be from 2 to 2.5 times higher than for in-kind food commodities of similar energy and nutritional content. Similar results emerged for a voucher program in Kenya, but not in Bolivia (ACF 2012).

## Impact Evaluations

This section presents new evidence emerging from a set of quantitative evaluations, most of which are taken from randomized and quasi-experimental studies. The next two subsections describe those studies and their results.

### *Descriptive Features*

We examine 11 impact evaluations in 10 countries published over the period 2006–2013.<sup>13</sup> These include the complete gamut of comparative experimental and quasi-experimental trials that, to our knowledge at the time of writing this paper, have been conducted on the matter in developing countries.<sup>14</sup> The studies were fielded in various contexts and include responses to sudden natural disasters (Sri Lanka), slow onset crises (Niger) and man-made emergencies (Congo, Ecuador); others are implemented as part of long-term, institutionalized social protection systems (Bangladesh, Cambodia, Ethiopia and Mexico), or envisage developmental interventions in fragile contexts and regions (Yemen, Uganda). Public works were included in 3 cases, while conditional and unconditional programs were present in 4 and 7 countries, respectively (4 countries had combined interventions).

Some notable differences between countries emerge. For example, the size of monthly transfers range from \$5 in Cambodia to \$50 in Niger; similarly, the share of transfers in household expenditures varies from 2.5 percent (Cambodia) to 30 percent (Bangladesh). The composition of food rations also vary, ranging from one commodity (rice) in Cambodia to up to 11 commodities in Mexico. Programs could have durations as different as a one-off 3 months intervention in Sri Lanka to a full 12 months (for 4 consecutive years) in Bangladesh. Distribution frequency and delivery mechanisms also differ, while evaluation methods include RCTs, quasi-experimental techniques (difference-in-difference, propensity score matching), regressions, and combinations thereof.

In particular, the Programa de Apoyo Alimentario (PAL) in Mexico provides unconditional food transfers to most of the target households, while at the time of data collection (2004–2005), cash transfers were provided to approximately 5 percent of beneficiaries living in villages so isolated that PROGRESA could not be implemented there. The transfer was of 150 pesos monthly, equivalent to \$13, which is equal to the cost of the food basket in local markets. No adjustments to transfer amounts were made for family size or composition. The transfer is delivered bimonthly through stores in the case of food, and biometric debit cards for cash transfers. The PAL experiment was carried out in 208 villages that were randomized into four treatment groups: an in-kind transfer plus educational classes (the standard PAL treatment); in-kind transfer without classes; a pure cash transfer of 150 pesos per month plus classes; and finally a control group. Cunha (2014) uses the experimental PAL data to estimate the impacts between the cash and food transfers using a difference-in-difference estimation strategy. Moreover, we completed Cunha's study by examining the previous evaluation by Skoufias et al. (2008). Using the same estimation method and sample size, their analysis offered additional insights for poverty and labor market participation.

In Niger, a large-scale public works program was implemented in 2011 over a six-month period, from April to September. The program included public works and unconditional transfers implemented in sequence for the same group of beneficiaries. In some villages, registered households received cash, while in others they received food. In cash-receiving villages, each beneficiary was provided with 1,000 FCFA (or about \$2) per day for a maximum of 25,000 FCFA per month. Food payments consisted of commodities similar to those typically consumed in the

region (see table 2 for a full list of food commodities provided in the ten countries). In this context, Hoddinott et al. (2014) assessed the relative impacts of cash versus food transfers through a randomized design using a single-difference evaluation approach (no baseline data was available). The results are differentiated by pre-harvest (or “hunger”) season in July and the post-harvest season in October.

The Productive Safety Net Programme (PSNP) in Ethiopia is a widely studied flagship safety net program. Launched in 2005, the PSNP provides predictable transfers to about 7.5 million food insecure people for a period of 6 months each year. Transfers are delivered through two components: public works that provide temporary employment at a monthly wage of \$16 (raised several times as a result of food prices), and an unconditional arm of direct support for households with limited working capacity. Sabates-Wheeler and Devereux (2010) compared the impacts of those cash and food interventions on food-gap and income using a single difference estimation strategy.

In Uganda, a program was implemented by WFP and UNICEF in the fragile Karamoja region to support early childhood development. The program is a conditional food or cash transfer, where the former were provided as take-home rations, while the latter included a cash transfer of about \$12 per child for each 6-week cycle. Food transfers were distributed through the WFP’s general food distribution program, and cash transfers were added electronically to a card and retrieved from mobile money agent. Gilligan and Roy (2013) estimate the impacts of the program on child cognitive and non-cognitive development using an ANCOVA evaluation.

In Ecuador, a three-modality transfer program (featuring cash, food, and vouchers) was designed to address the food security and nutrition needs of Colombian refugees and to support their integration into Ecuadorian communities. The value of the monthly transfers was standardized across all treatment arms at \$40 per month per household. The cash was transferred monthly onto preprogrammed ATM cards. Cash transfer households were able to retrieve the cash in bundles of \$10. Vouchers were given in denominations of \$20, redeemable for a list of nutritionally approved foods at identified supermarkets. Hidrobo et al. (2014) use the experimental design of this program to assess the impacts of transfers using an ANCOVA approach.

Aker (2013) evaluates the impacts of unconditional cash transfers and vouchers in the context of a complex emergency in the Democratic Republic of Congo. The program was part of the humanitarian response to internally displaced persons living in informal camps. Cash transfers and vouchers totaling \$130 were provided over a seven-month period in three installments.<sup>15</sup> Cash was directly deposited into an interest-free account at the office of a local cooperative located in the regional market center. Vouchers were used in fairs, including 122 vendors and 4 primary schools in the area. Impacts were estimated using a difference-in-difference with fixed effects.

In Yemen, an emergency intervention to address seasonal food shocks was carried out in 136-village clusters that were randomly assigned to receive either a food or a cash transfer. Over the course of seven months, households received 3 food baskets. Over the same time period, households in the cash treatment group received 3 cash transfers equal to the local value of the food basket (about \$50). Cash transfers were distributed through ID cards from the Yemen Post and Postal Savings Corporation, and food transfers were delivered through the Ministry of Education. Schwab (2013) compared the impacts of food and cash transfers using single difference, difference-in-difference, and ANCOVA estimation strategies.

A pilot intervention was implemented in Cambodia as an extension to an existing food for education program. Food was provided through two modalities: early morning meals and take-home rations. The expansion included a cash scholarship to test the relative efficacy of the take-

home rations and cash scholarships. Both transfers were conditional on a minimum attendance rate of 80 percent. The cash transfer was \$60 per year and the take-home ration consisted of 10kg of unfortified rice per month. Barker et al. (2014) estimated the comparative impacts using a difference-in-difference approach.

In post-tsunami Sri Lanka, an emergency cash transfer program was designed to support the needs of affected villages as part of the broader food-based operation ran by WFP. The cash transfer pilot disbursed an average amount of US\$2.44 per week. Food rations were specified for weekly amounts but in most cases transfers were given in bulk. Cash transfers were distributed by the Samurdhi Authority in two-week installments through bank accounts. Sharma (2006) compared the relative impacts using a difference-in-difference estimation strategy.

In Bangladesh, Ahmed et al. (2010) examined the efficacy of four different programs utilizing food-only, cash-only, and combined cash and food transfers. For the purpose of this paper, we examine only the two “pure” cash and food transfer interventions, namely the food-based Income Generating Vulnerable Group Development (IGVGD) and the cash-based Rural Maintenance Program (RMP). The IGVGD program exclusively targeted poor women, who receive a monthly food ration over a period of 24 months. The RMP also targeted divorced, widowed, separated, or abandoned women with 4 years of employment to maintain rural roads. The RMP participants received a monthly net salary of \$30. Impacts of both programs were estimated using propensity score matching techniques.

The specific features of the interventions are summarized in table 1, and describe the program types, modalities, transfer size, transfer as a percentage of household pre-program expenditures, frequency of distribution, household size, duration, delivery mechanisms, sample size, and evaluation method.

Table 1. Descriptive Statistics of Impact Evaluations

Name	Country	Program type*	Modality	Cash size (US\$)	Food basket	Size as % of Pre-program HH exp.	Frequency of Transfer	HH Size	Exposure	Years of data	Delivery mechanism	Sample Size (HHs)	Evaluation Methods	Reference
PAL	Mexico	CT, UT	Cash, Food	13	F <sup>1</sup>	11.5	Monthly (cash), bi-monthly (food)	4.2	trial 1 year	2004–2005	Biometric debit cards	5,028	DD	Cunha (2014)
Zinder project	Niger	PW, UT	Cash, Food	50	F <sup>2</sup>	11.5	Bi-weekly	7	6 months	July to October 2011	Mobile ATMs, smart cards	2,209	SD	Hoddinott et al., (2014)
PSNP	Ethiopia	PW, UT	Cash, Food	16.2	F <sup>3</sup>	N/A	Monthly	5	6 months per year	2006–2008	N/A	960	SD	Sabates-Wheeler and Devereux (2010)
Early Childhood Development	Uganda	CT	Cash, Food	12	F <sup>4</sup>	N/A	6-week cycle	6.22	12 months	October 2010 to April 2012	Mobile money cards	2,450 (est.)	ANCOVA	Gilligan and Roy (2013)
Colombian refugees project	Ecuador	CT	Cash, Food, Vouchers	40	F <sup>5</sup>	16	Monthly	3.8	6 months	April to November 2011	ATM card	2,122	ANCOVA	Hidrobo et al. (2014)
IDPs project	Democratic Republic of Congo	UT	Cash, Vouchers	18.57	V <sup>6</sup>	18.96	Bi-monthly	5.5	7 months	September 2011 to March 2012	Bank accounts	252	Fixed effects	Aker (2013)
Unconditional safety net	Yemen	UT	Cash, Food	49	F <sup>7</sup>	N/A	Bi-monthly	7.9	6 months	2011–2012	ID card via Postal Savings Corporation	3,353	SD, ANCOVA, DD, DDD	Schwab (2013)
Scholarship pilot program	Cambodia	CT	Cash, Food	5	F <sup>8</sup>	2.5	Monthly	6	10 months	August 2011 to August 2012	On-site manual distribution	4,091	DD	Barker et al. (2014)
CTPP	Sri Lanka	UT	Cash, Food	9.8	F <sup>9</sup>	26.3	Bi-weekly (cash), bi-monthly (food)	3.8	3 months	November 2005 to February 2006	Samurdhi Bank	1,357 s	DD	Sharma (2006)
IGVGD, RMP	Bangladesh	UT, PW	Cash, Food	19.7	F <sup>10</sup>	30 (cash) 15.5 (food)	Bi-monthly (cash), monthly (food)	4.6	2–4 years	2006	Public banks	1,200	PSM	Ahmed et al. (2010)

Note: <sup>1</sup> Seven basic items—enriched corn flour, rice, beans, dried pasta soup, biscuits, fortified milk powder, and vegetable oil—and two to four supplementary items (including canned sardines, canned tuna fish, dried lentils, chocolate, breakfast cereal, or corn starch; <sup>2</sup> 3.5 kg of grain (primarily maize in the first transfer period and sorghum in the second), 0.72 kg of pulses (cowpeas, red beans, or lentils), 0.14 kg of vegetable oil, and 0.035 kg of salt; <sup>3</sup> 3 kgs of cereals, plus pulses and oils; <sup>4</sup> Food basket of approximately 1,200 calories, includes corn soy blend (“CSB” – highly fortified with iron among other nutrients), vitamin-A fortified oil, and sugar; <sup>5</sup> The food basket was valued according to regional market prices at \$40 and included rice (24 kilograms), vegetable oil (4 liters), lentils (8kilograms), and canned sardines (8 cans of 0.425 kilograms) (voucher: The list of approved foods consists of cereals, tubers, fruits, vegetables, legumes, meats, fish, milk products, and eggs); <sup>6</sup> three food fairs, where participants could get palm oil, sugar, cassava flour, beans, rice, vegetable oil, dried fish, salt, potatoes and peanuts; <sup>7</sup> For an average household size of seven persons is 50 kg of wheat flour and 5.0 liters of vegetable oil; <sup>8</sup> 10 kg of rice per month; <sup>9</sup> 1.4 kg Rice, 1.4 kg Wheat flour, 0.42 kg Pulses, 0.14 kg Oil, 0.14kg Sugar, 0.14 kg Corn soy blend; <sup>10</sup> up to 20 kilograms (kg) of wheat or 16 kg of rice per month. \*CT= conditional transfer, UT = unconditional transfer, PW = public works.

## Impacts

The compilation of evaluation covers a number of dimensions. Table 2 lists 15 of them, including their availability across the examined countries. In most cases, cash interventions were conducted as a smaller-scale addition to preexisting large food-based programs, or as part of crisis responses. It is somewhat natural, therefore, that the interventions tend to be generally food security-oriented. Indeed, about half of the indicators are food and nutrition-related, while indicators on poverty, income, and assets were collected in a more limited number of cases.<sup>16</sup>

Table 2. Indicators Included in the Evaluations

	Mexico	Niger	Ethiopia	Uganda	Ecuador	Congo	Yemen	Cambodia	Sri Lanka	Bangladesh
Total consumption	✓						✓	✓		✓
Food consumption	✓	✓			✓		✓	✓	✓	✓
Non-food consumption	✓	✓			✓		✓	✓	✓	
Food gap			✓	✓						
Food diversity		✓		✓	✓	✓	✓	✓	✓	
Caloric intake					✓		✓		✓	✓
Anthropometric measures				✓				✓		
Income			✓					✓		✓
Assets								✓		
Poverty headcount	✓									✓
Labor market participation	✓									
Sickness probability	✓									
Anemia	✓			✓						
School dropout rates								✓		
Cognitive development				✓						

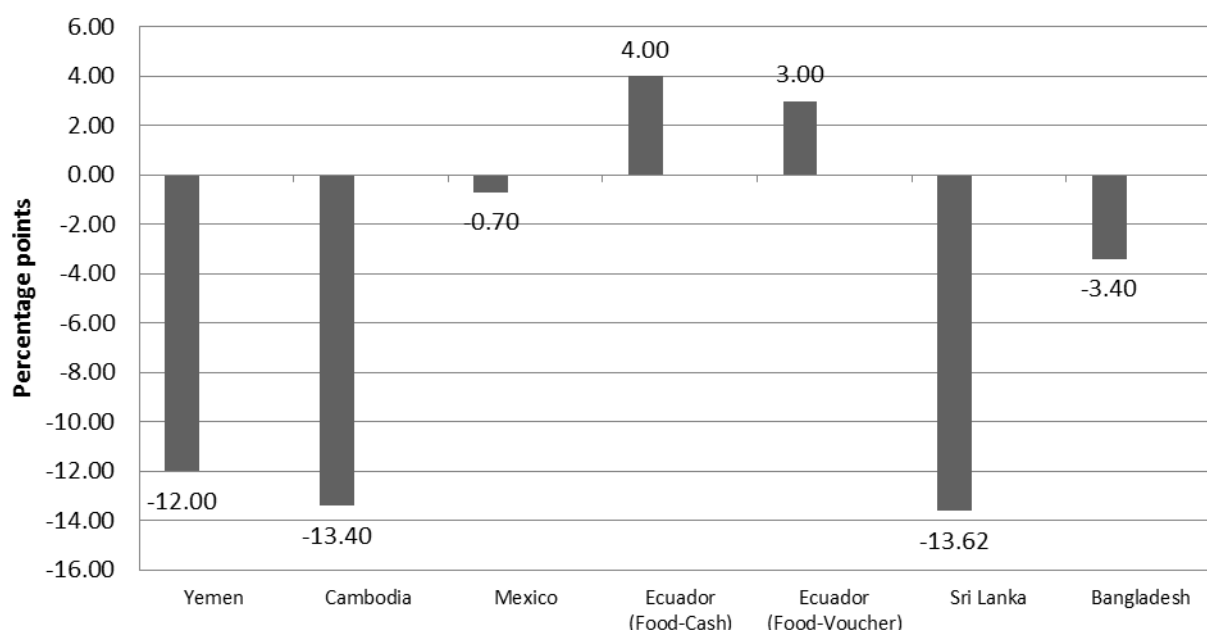
Importantly, there is a rich body of literature and debate on the comparative performance of indicators and measurement techniques for food security and nutrition, particularly as they relate to access and utilization of food (Dary and Imhoff-Kunsch 2012; Barrett 2010; Wisemann et al. 2009; Webb et al. 2006). The selected studies show that, in absolute terms and across basically all indicators, cash, food, and vouchers are effective in meeting program objectives. They also rejected the myths of food being resold on markets or cash being spent on non-desirable items.<sup>5</sup> The following subsections

<sup>5</sup> In Mexico, more than half of the cash transfer was spent on food, out of which a quarter was devoted to nutritious food items such as fruits and vegetables. In Niger, cash recipients reported spending 70 percent of the transfer on food items, 10 percent on nonfood items, 9 percent on transfers to the households, saving 7 percent, and 3 percent to pay back loans. In Ecuador, cash beneficiaries used 83 percent of the transfers for food expenditures. The remainder was spent on nonfood expenditures (6.3 percent), shared with others outside the household (2.4 percent), and saved for later use (8.3 percent). In Congo, cash households used their transfers to purchase over six different categories of goods, health expenses, school fees, and debt reimbursement. In Yemen, cash households report spending 88 percent of their transfer on staple foods. Unlike food households, cash households report spending a portion of their transfers towards repaying debts (5 percent), transportation (2 percent), and near zero on qat (14 out of 10,500 YER). In Uganda, the average cash beneficiary spent 53 percent of the transfer on food (41 percent on staples), while 23 percent was allocated for nonfood goods and 16 percent of the cash was saved.

examine the relative impacts of cash and food transfers on food consumption, availability of calories, dietary diversity, poverty, and malnutrition.

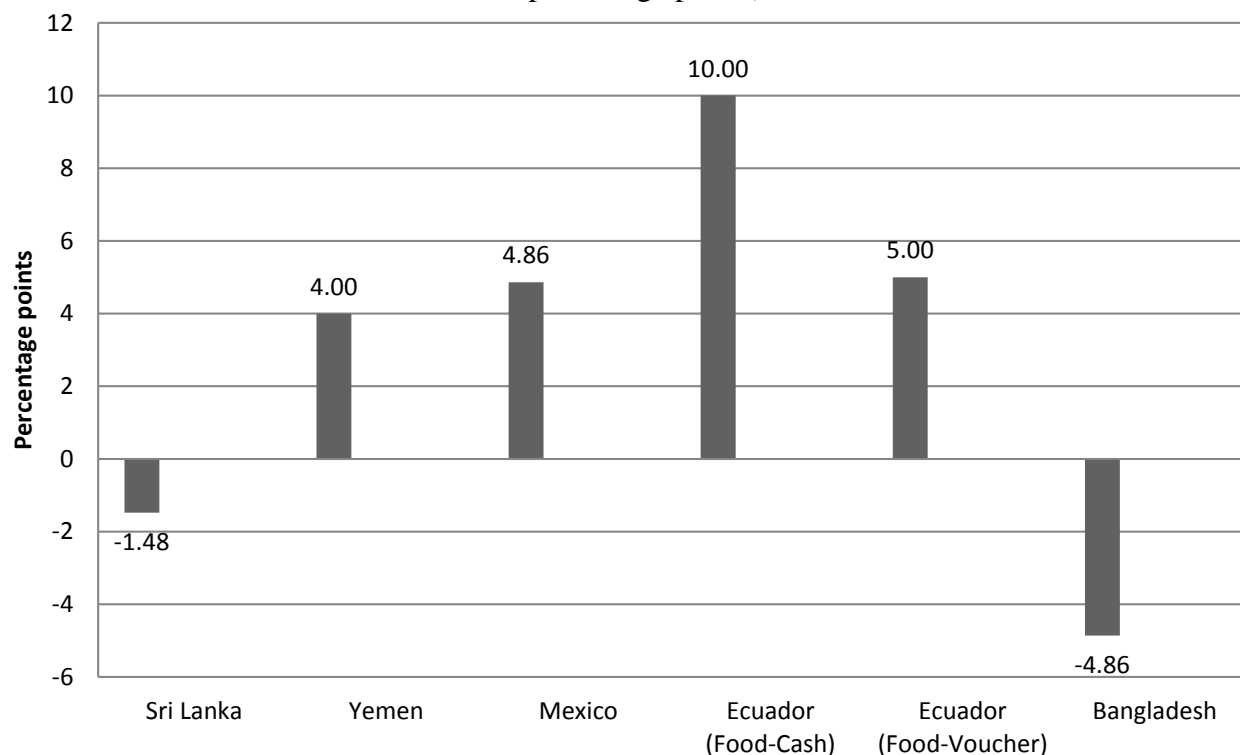
One of the most widely used indicators in the sample is food consumption. Adopted in 7 out of the 10 countries, the measure accounts for expenditures or value of food consumed at the household level. Figure 1 shows the difference in impacts on food consumption in Yemen, Cambodia, Mexico, Ecuador, Sri Lanka, and Bangladesh. Differences are expressed in percentage points (namely, average impacts among food-receiving households minus those among cash-recipients), with negative values indicating the cases for which cash is more effective, and vice versa.

Figure 1. Relative impacts of food versus cash transfers on food expenditures (difference in percentage points)



The figure shows that only in Ecuador were impacts of food consumption larger for food-receiving beneficiaries, including relative to both cash and voucher transfers. In Yemen, Cambodia, Mexico, Sri Lanka, and Bangladesh the impacts on food consumption are higher for cash than for food-beneficiary households. In three cases—Yemen, Cambodia, and Sri Lanka—the difference is double digit. For Mexico and Ecuador, the difference in impacts is, however, not statistically significant.<sup>17</sup> Measures for quantifying calorie intake may present additional information regarding the difference in impacts on per capita food availability. Figure 2 sets out the impacts of food and cash transfers for programs in Sri Lanka, Yemen, Mexico, Ecuador, and Bangladesh.

Figure 2. Relative impacts of food versus cash transfers on per capita calorie intake (difference in percentage points)



In contrast with food consumption measures, food transfers have a larger impact on calorie intake relative to cash in most contexts. In Ecuador, the larger effect on calories from food was mainly due to larger increases in cereal consumption (which represented 41 percent of households' caloric intake). In Yemen, higher caloric consumption from food stemmed from the basket composition, including wheat and oil. In the case of Sri Lanka, the impact is negative but not significant. After disaggregating these impacts geographically, Sharma (2006) notes that the impacts only decline significantly for one sub-region. The reason for this spatial difference is that the household baseline survey was conducted the week after Muslim and Hindu festivities. Additionally, the negative effect can be explained by a change in diets, that is, a shift in consumption from highly caloric foods to diets of higher quality (e.g., eggs, meat). In the case of Bangladesh, cash transfers had a larger impact on food consumption. One possible explanation is that the size of the cash transfer was 70 percent higher than the food transfer. Ahmed et al. (2010) address this difference by comparing the change in marginal propensity to consume food, which shows consistent results.

Indicators that measure dietary diversity can provide insightful information on the quality of consumption patterns, in addition to its quantity. Three indicators are used in the evaluations, namely the Dietary Diversity Index (DDI), Food Consumption Scores (FCS) and Household Dietary Diversity Score (HDDS).<sup>6</sup>

<sup>6</sup> The Dietary Diversity Index reflects the number of different foods or food groups consumed over a given reference period. The Food Consumption Scores index measures the frequency of consumption of 8 food groups during the seven days before the survey. The Household Dietary Diversity Score indicates the the number of food groups consumed in the previous seven days from 12 groups. It differs from the DDI in that frequency is measured across standardized food groups instead of individual food items.



Difference for FCS is available for Cambodia, Niger (July and October), Ecuador, and Yemen. Results are mixed, with cash being more effective in three cases (Ecuador's cash and vouchers arms and Yemen), and food in the other three (Cambodia and Niger, both seasons). In Ecuador, the larger increase in dietary diversity for vouchers was mainly due to larger increases in the number of days that participants consumed vegetables, eggs, milk, and dairy. Similar effects of transfers were noted for the DDI, which included the same sample of countries except Cambodia. One reason that the cash recipients had less diverse diets lies in their choice of using a significant proportion of their transfers to buy grains in bulk, the least expensive form of calories present on local markets. As pointed out by Hoddinott et al. (2014), such a purchasing strategy was a reflection of uncertainty regarding future food prices.

The two studies in Congo and Ecuador also allowed for comparing the HDDS index among cash and voucher-receiving arms. In Congo, vouchers had a large impact on households' dietary diversity (by 3.36 food groups), a 15 percent increase. Despite the comparatively lower impact of cash transfers, the difference in impact between cash transfers and vouchers is not significant. In Ecuador, the impact among cash and voucher recipients is fairly similar.

The food gap measure indicates the decrease of months of food shortage. In the case of Ethiopia, a two-year exposure to food rations led to less months of food shortage compared to households participating in cash transfers (public works). In Uganda, among cash- and food-treated households there was a reduction of 0.6 and 0.4 months of food insecurity, respectively. However, the difference is not statistically significant.

Some countries present data on the relative impacts of transfers on short-term and long-term nutrition-related dimensions. In Mexico, both food and cash transfers increased the intake of micronutrient (iron) amongst children by 1.61 mg and 1.10 mg, respectively. However, the difference is not statistically significant. The same pattern holds for increases in zinc and vitamin C. Similarly, anemia prevalence was reduced by 2 percent in food-receiving households and 4 percent in the cash-receiving households.

In Uganda, the prevalence of severe underweight was 3.8 percent lower in the cash group than in the food group, a result significant at the 10 percent confidence level. Cash transfers reduced anemia prevalence by about 10 percentage points for young children (also in this case at 10 percent confidence level). In this context, food transfers had no significant impact. Finally, in Cambodia neither treatment modality in the food-cash scholarship program had significant impacts on anthropometric indicators, possibly because of the small transfer size and short exposure to treatment.

In some contexts cash and food transfers had an income multiplier effect on beneficiary households. In Ethiopia, PSNP food beneficiaries had a positive and significant income growth of 59.7 percent (at a 1 percent confidence level). In Cambodia, treatment households (both food and cash recipients) increased their net disposable liquidity by about \$54 over the course of the year. In Bangladesh, both food and cash transfers increased income significantly: the cash-based RMP increased beneficiary income by 31.4 percent and the food-based IGVGD by 27.8 percent.

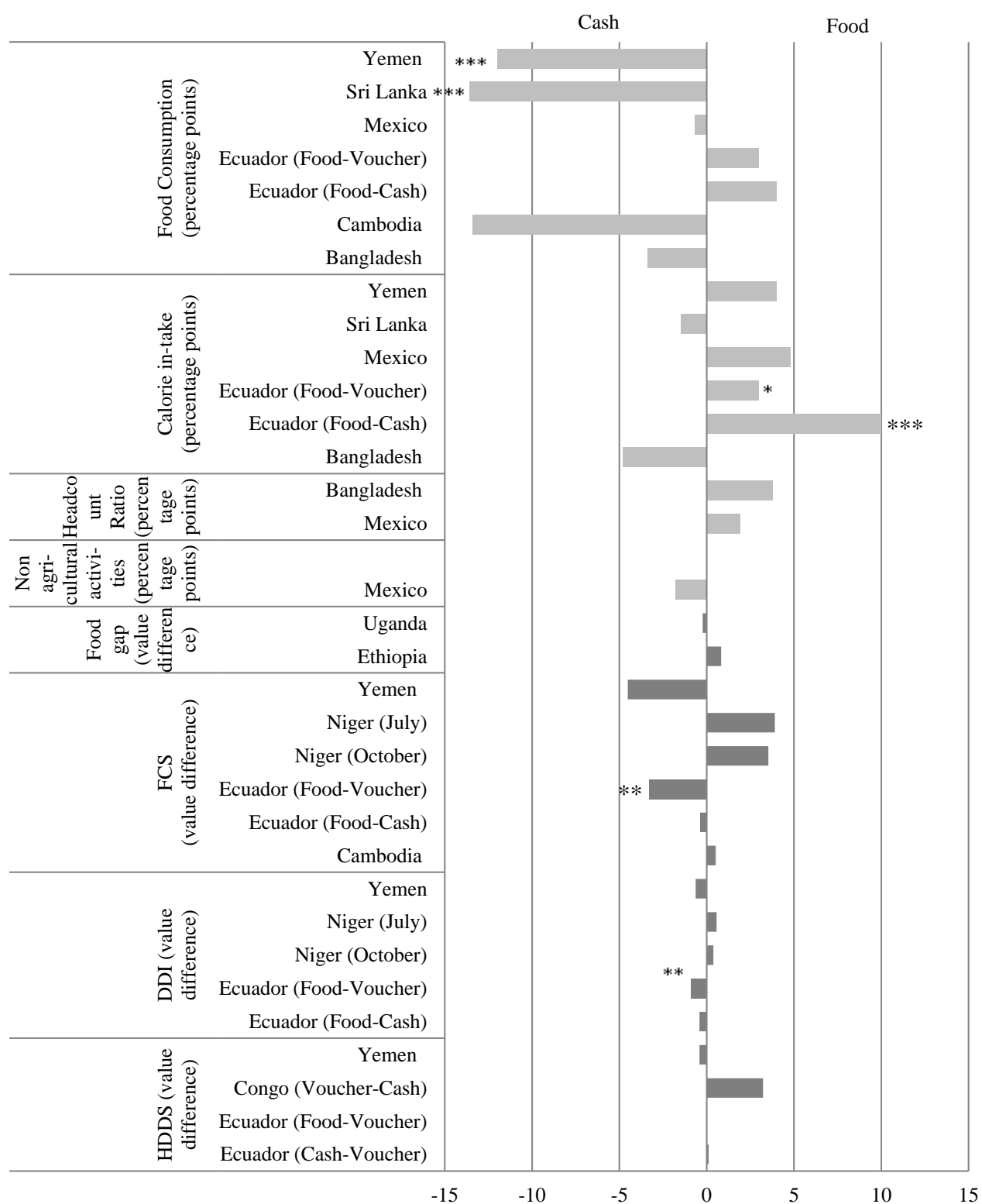
Both food and cash transfers reduced poverty in Mexico and Bangladesh. Skoufias et al. (2008) showed the impact of cash and food transfers on the headcount ratio as measured by the food poverty line. Similarly, Ahmed et al. (2009) estimated the impacts of cash transfers from the RMP program and food transfers from the IGVGD on the extreme poverty headcount ratio.

In both instances, food transfers had larger impacts, with a difference on 3.8 and 1.94 percentage points in Bangladesh and Mexico, respectively. The overall impacts of transfers on the poverty gap are larger. In the context of Mexico, food transfers decreased the poverty gap by 22.3 percent and cash transfers by 18.9 percent; moreover, the severity of poverty decreased by 27.8 percent and 22.97 percent, respectively. Skoufias et al. (2008) argue that the PAL transfer—equivalent to 11.5 percent of pre-

transfer level household consumption—may have generated a multiplier effect that led to a reduction by 13 to 15 percent in the headcount poverty rate in two years. In the case of labor market participation, both food and cash transfer had a negative impact in agricultural activities, but a positive one in non-agricultural activities. Cash-receiving households increased non-agricultural activities by 7.1 percent and food-receiving households by 5.8 percent.

Based on the results presented in this section, figure 3 summarizes impacts by transfers and indicators. On average, impacts tend to be balanced across modalities, with no systematic dominance of one transfer over the other.

Figure 3. Summary of relative impacts by transfer modality and indicator



Note: Bars in light gray refer to percentage points, dark gray bars refer to changes in specific indicator values. Level of significance is indicated by the asterisks (\* at the 90 percent level, \*\* at the 95 percent level, \*\*\* at the 99 percent level).

### Costs

Most of the examined evaluations also conducted a cost analysis, including Mexico, Niger, Ecuador, Democratic Republic of Congo, Yemen, and Bangladesh. In Mexico, logistics costs of moving commodities from warehouses to villages have been estimated to be about 30 pesos per box: this is equivalent to nearly 20 percent of the wholesale cost of the transfer (150 Mexican pesos, or approximately USD 15). Since cash transfers were distributed in the same way as under Mexico's Oportunidades program, based on such data Cunha (2012) estimated that it costs 2.4 percent of the transfer amount to deliver cash to recipients. Therefore, food is about ten times more costly than cash transfers, although it is of higher value (indeed, the 150 pesos cash transfer could only purchase about 73 percent of the in-kind basket; see table 4).

Table 4. Costs per Total Transfer

Country	Food	Cash	Voucher
Mexico	\$2.29	\$0.31	
Niger	\$12.91	\$4	
Ecuador	\$11.50	\$3.03	\$3.30
Dem. Rep. of Congo		\$11.34	\$14.35
Yemen	\$10.37	\$4.09	

Source: Cunha (2014), Hidrobo et al. (2014), Hoddinott et al. (2014), Aker (2013), Schwab (2013).

In Niger, food was about three times more expensive to implement than cash payments. However, Hoddinott et al. (2014) excluded costs that were common to both the food and cash payments, such as expenses associated with implementing the public works, identifying the beneficiaries, program sensitization, identification of implementing partners and contract negotiations with partners selected to implement this intervention.<sup>18</sup> Some cash-specific costs were not considered, like fixed costs associated with setting up the cash delivery system. For example, each smart card used for the cash payments cost USD 6.00, while there were additional costs associated with computer programs needed to dispense payments through mobile ATMs.

In the case of Ecuador, food costs were about four times higher than for cash and vouchers. The cost of physical materials associated with vouchers, such as printing, is trivial. However, significant staff costs are associated with supermarket selection, the negotiation of contracts with individual supermarkets, and voucher reconciliation and payment. These staff costs account for nearly 90 percent of the cost of implementing the voucher component of the intervention. The cost of generating the debit cards was the main cost item in the cash transfer. The food transfer was significantly more expensive because of the cost of transporting the food to the distribution sites and the rental of storage facilities. Taking bulk items and repackaging them for distribution is also very costly, accounting for approximately 30 percent of the cost of distributing the food ration (Hidrobo et al. 2014).

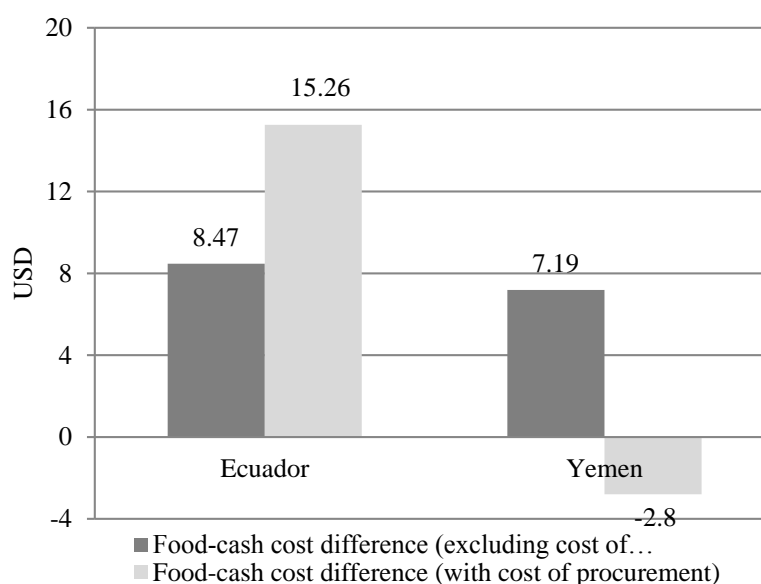
Interestingly, Margolies and Hoddinott (2014) noted that food logistics costs also hinge on the location of food distribution points—that is, higher costs can be in part explained by delivering food directly to beneficiaries' communities, such as for security reasons in Yemen; yet cash beneficiaries in Yemen had to collect the transfer at post offices, which meant higher transaction costs. In Ecuador, food distribution sites were located farther than cash and voucher payment points, thus increasing private costs (time and money); in Uganda and Niger, there appears to be no difference in transaction costs since both transfers were distributed at the village-level. In general, there appears to be a trade-off between costs for the implementer and those for beneficiaries: as payment or distribution points get closer to beneficiaries, costs for the implementer get higher while the transaction costs for beneficiaries dwindle.

In other words, programs that seem less expensive could be so because the cost of obtaining benefits had been shifted from the implementer to the beneficiary.

The studies also raise the question of how to measure the value of food, whether at local market prices or procurement costs, with the latter being a more realistic cost (including for the different commodities that compose the basket). For two cases, Ecuador and Yemen, Margolies and Hoddinott (2014) estimated the full cost of cash and food transfers, with costs for food taken at the procurement level. In Ecuador, the procurement costs for food were higher than their local market value: indeed, accounting for the local procurement of most canned fish, rice, lentils and oil, and including the international procurement of some oil and lentils, it turns out that it cost USD 46.76 to provide a transfer that is locally valued at USD 40. This led to a total cost of providing food of USD 58.25 (USD 46.76 plus 11.46), which even exacerbated the cost differences, that is, total cost for cash is USD 42.99 while for vouchers it is USD 43.27 (the value of both voucher and cash transfer is, by definition, USD 40). Indeed, the difference between food and cash is now USD 15.26 per transfer compared to USD 8.47 (i.e., USD 11.46 minus USD 2.99) when transfer values were excluded.

In Yemen, food was more than twice as costly as cash transfers. Yet the difference becomes significantly smaller if additional cost items are included. For instance, households faced significant transaction costs (travel) for receiving the cash transfer. By factoring beneficiary cost to collect transfers, this raises the per-transfer cost (excluding the value of the transfer) of cash to USD 8.22. For food transfers, the addition of beneficiary costs raises the per-transfer cost (excluding the transfer value) to \$11.35 (Schwab 2013). Moreover, market conditions were such that it was possible to procure for USD 39 a food basket locally valued at USD 49. Considering those factors, the cost difference between food and cash cost even reversed, with cash being USD 2.8 more expensive than food (figure 4).

Figure 4. Difference in total costs (USD) between transfer modalities, with and without procurement (food minus cash costs)



Source: Margolies and Hoddinott (2014).

In the Democratic Republic of Congo, vouchers were more expensive than cash transfers. The cost breakdown shows that staff time represents the largest percentage of costs for both interventions, followed by transport and voucher printing (for the voucher intervention) and account-opening fees (for

the cash intervention). Yet since the account opening fees are a one-time, fixed cost, if the program were to continue cash transfers with existing beneficiaries, the cost per cash program recipient would have only been USD 6 or 8 less expensive per program recipient (Aker 2013).

In Bangladesh, Ahmed et al. (2010) considered the costs for delivering cash and food transfers. For cash, only the bank transaction cost was considered, thus generating a very low cost for cash transfers (0.00115 per taka delivered). In the case of food, the analysis considered procurement costs as well as costs incurred at ports, losses, internal transport, storage, and handling, for a total cost of 1.2 taka per 1 taka transferred.

Yet few studies have explicitly considered costs *and* impacts (or cost-effectiveness) of a program, hence quantifying the possible trade-offs between the two. As illustrated by a maternal-child health program in Honduras, "... it cost 1.03 lempiras to deliver 1 lempira of income transfer in the form of a cash-like coupon, while it cost 5.69 lempiras to deliver the same income transfer in the form of food. However, the cash transfer had no effect on child's calorie consumption nor on use of the health centers, while the food transfer increased both," (Rogers and Coates 2002). In Bangladesh, Ahmed et al. (2010) estimated that the cost required to increase 100kcal to beneficiaries is roughly similar for cash and food transfers (USD 3.28 and USD 3.21, respectively), while the cost for increasing household income by 100 taka is lower for food (USD 0.68) than cash transfers (USD 1.27). In Ecuador it was estimated that food transfers cost twice as much as vouchers to boost calorie intake by 15 percent, and were 5 times as costly as a way of increasing dietary diversity and quality (Hidrobo et al. 2014). Table 5 details the results for Ecuador.

Table 5. Cost of Increasing a Given Indicator by 15 Percent in Ecuador

Indicator	Food	Cash	Voucher
Consumption	\$10.78	\$3.79	\$3.81
Calories	\$10.78	\$7.58	\$4.50
Household dietary diversity score	\$28.75	\$11.36	\$8.25
Dietary diversity index	\$15.68	\$3.25	\$2.91
Food consumption score	\$17.25	\$4.13	\$3.09

Source: Hidrobo et al. (2014)

In sum, cash and vouchers seem generally more efficient than food transfers. However, conclusions should be drawn with caution. Methods and approaches vary greatly, hindering intra- and cross-country comparisons. Most of the studies assess, for instance, food costs at local market prices instead of procurement costs. In other words, the availability of tools for transparent, comparable, and systematic cost analysis is limited. The development of such tools could help provide a more accurate and realistic account of comparative program performances.

## Discussion

The evaluations reviewed in the previous section prompt two questions: first, are those studies helping to advance the debate meaningfully? The answer is yes, definitely so, including by providing credible evidence, fresh perspectives and gearing the discussion toward results-oriented perspectives. In line with Hoddinott (2013), "Policy and interventions design discussion need to shift from their current ideological and political focus to one that emphasizes greater precision in interventions objectives, more nuanced understanding of context, and greater emphasis on costing." The studies not only provide solid evidence based on counterfactuals, but also offer a platform for discussing a number of related social protection design and policy matters.

However, are the reviewed evaluations conclusive about the debate? No, most probably not. Indeed, like any evaluation method, experiments have inherent advantages and limitations. While not all the studies were RCTs, findings from those methods are particularly relevant when interpreted in light of the very specific circumstances that define a given setting, although that may limit extrapolations and lessons for different scenarios (external validity).

Importantly, our review showed that context and design matter. For example, the impacts tend to be associated with factors such as the marginal propensity to consume food, the duration of the program, the frequency of transfers, and perceived risks (e.g., of prices in the context of Niger), all of which affect purchasing and consumption behaviors. The composition of food baskets also plays an important role, including having a direct bearing on household dietary diversity and calorie availability. Therefore, a key issue that emerges from the evaluations is the need to interpret transfer selection as part of an organic decision-making framework. In particular, the choice of an optimal safety net should be guided by the specific objectives pursued, the peculiar contexts where programs are implemented, the choice of key design parameters (e.g., targeting method, conditionality, transfer size, duration, etc.), and the selection of modalities (including based on technical issues such as the functioning of markets, etc.). Transfer performance is ultimately and largely a function of those factors, instead of an inherent superiority of one modality over the other.<sup>19</sup>

Of course, a range of other elements help shape the program environment, such as the role of theory (including how that shapes the views of decision-makers), the availability of local and international evidence, and political economy. Although conceptually desirable, it will probably be impossible to fully separate technical and evidence-related issues from those of political economy. As such, real-world decision-making should perhaps consider political economy as an integral feature of the debate, and not necessarily a mere “non-technical” issue. Also, it is interesting to note that while only a few years ago the use of technology seemed to give an edge to cash transfers, the adoption of technological solutions (e.g., on payments, monitoring, verification of identity, etc.) now also underpins a range of voucher and food-based programs, hence making the field more leveled and overall transparent.<sup>7</sup>

The paper also shows that results on effectiveness (impacts) seem considerably more robust than those on efficiency. Devising robust and standardized tools and methods for identifying, collecting, and analyzing cost data should be a key priority for the transfer debate. In this regard, it would be important for cost calculations to be based on a more nuanced understanding of supply chains and agricultural markets. Indeed, implementation models can vary considerably, depending on the specific approaches and actors involved at different points in the supply chains. In the case of school feeding, for instance, Gelli and Suwa (2014) noted that “... different approaches can even co-exist within the same country, where, for instance, programme implementation is owned by decentralised institutions (e.g. individual states in Brazil or India), or where agencies (...) are complementing the national programmes (e.g. Ghana and Kenya), [or models] linking the provision of goods and services for school feeding to smallholder farmers and the community.” Those nuances need to be taken into account for credible cost analyses. Following Gelli et al. (2012), “... a holistic, system wide analysis of the goods, funds and information flows between the involved stakeholders and helps to identify the opportunities to achieve cost-effective and sustainable programs.” In a similar vein, the extensive logistics required for food-based programs—including procurement, transport, storage, and distribution—may posit particular risks for accountability, transparency, and “leakages”. In India, for example, it was estimated that diversion and

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<sup>7</sup> For example, WFP is currently supporting some 880,000 Syrian refugees in Lebanon through the use of electronic vouchers implemented in partnership with Mastercard. In Chhattisgarh, India, the PDS program distributes food by using portable technologies available among participating retailers and allowing people to buy commodities in their store of choice.

corruption account for significant losses: in the early 2000s, about 58 percent of the food under the PDS program did not reach the intended beneficiaries (World Bank 2011). Such losses throughout the logistics chain should also be accounted for using comprehensive cost-effectiveness assessments of alternative modalities.

Because of program objectives and rationale, the evaluations included a range of food security-related measures; more comparative research around a wider set of dimensions, especially child malnutrition, would help advance research and practice. Value-based vouchers as a modality seem underexplored relative to their proven and possible performance, and so is the combinations of cash and food transfers. For instance, new evidence suggests considerable potential stemming from a mix of modalities, especially in protracted emergency contexts (Langendorf et al. 2014; Ruel and Alderman 2013). At the same time, attention should be paid to how objectives and metrics are set. For example, if a program is designed to pursue food security objectives, studies often do not capture what might be the side-effects on housing, clothing, debt repayment, etc. In other words, “choosing what is important” in terms of a study’s focus may be subjective, hence leaving some other important dimensions unexplored.

## Conclusions

This paper reviewed key issues and evidence in the cash versus food debate, including a new generation of comparative evaluations undertaken in ten developing countries. Those studies represent a refreshing evidence-based approach that help inform and navigate a longstanding quandary.

The reviewed evidence shows that, in absolute terms, both modalities work. When compared to control groups, cash and food transfers (and vouchers when considered) bolstered improvements in a range of indicators such as food consumption, income, dietary diversity, poverty, and malnutrition. The paper also argues that, in relative terms, transfer modalities can lead to varied and mixed impacts over a range of dimensions. We observe a mild tendency of cash transfers to be more effective than food in enhancing food consumption (in five studies out of seven), while food seems to outperform cash in increasing household caloric intake (in four evaluations out of six). However, overall effectiveness cannot be generalized and it depends not only on particular objectives, but also on the specific indicators used to measure those objectives.

Differences in design and context explain part of the difference in performance between alternative transfer modalities. Indeed, the impact of cash and food transfers can also differ in programs with identical design and contexts. Therefore, since transfer modalities can alter the impact pathways of an intervention, transfer selection should be considered as a key choice in safety net decision-making, similar to other program design features such as conditionality and targeting methods.

Costs will be an increasingly key factor in gauging performance, hence calling for more rigorous and systematic cost-effectiveness analyses than many of those currently available. In general, the reviewed studies show that cash transfers and vouchers tend to be more efficient than food-based interventions. Yet results should be interpreted with caution. Approaches for cost calculations are often not clearly described, rely on simplistic assumptions, and tend to be discretionary in the type of cost items considered. More standardized and robust approaches are required so that efficiency analyses match the higher standards of effectiveness offered by the examined impact evaluations.

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<sup>1</sup> A notable exception is the United States' Supplemental Nutrition Assistance Program (SNAP), or ex-Food Stamp Program. As mentioned in the next section, SNAP has been subject to ample empirical scrutiny in comparison to cash transfers.

<sup>2</sup> In most cases, commodities are provided by private or commercial partners. Yet retailers could also be public or a mix of public-private actors, such as the case of fixed-price outlets in Syria (Omamo et al. 2010).

<sup>3</sup> In practice, commodity-based vouchers can also provide some room for choice. There are instances where beneficiaries can choose between commodities so long as their weight does not exceed the limit established by the program (Levan Tchatchua, personal communication).

<sup>4</sup> Initiatives such as WFP's Purchase for Progress program deliberately procure food from small farmers, hence spurring local economic gains among well-identifiable actors similar to vouchers'.

<sup>5</sup> The program is the world's largest food voucher scheme. According to USDA data, about 1 every 7 Americans, or 47.4 million individuals, benefited from the SNAP voucher program from 2013 to 2014. See: <http://www.fns.usda.gov/pd/34SNAPmonthly.htm>.

<sup>6</sup> During the same period, the debate was also examined in the context of famine relief as laid out in the influential analysis by Dreze and Sen (1989, p.97).

<sup>7</sup> For instance, since 2000 locally-procured food in developing countries soared by 45 percent, while untargeted bilateral food aid (i.e., food aid sold on local markets) now represents only about 3 percent of total flows. The entire volume of international food aid itself amounts to less than 0.25 percent of total global food production (Barrett et al. 2012). Gradually, innovations such as the use of smart cards, mobile phones, biometric devices, and e-monitoring tools were also adopted in food and voucher programs (Omamo et al. 2010).

<sup>8</sup> Paul Niehaus, keynote address at the event "Cash Transfers: The New Benchmark for Foreign Aid?" Center for Global Development, May 9, 2014.

<sup>9</sup> For an interesting view on how recent high food prices may have ultimately benefited the poor, see Headey (2014).

<sup>10</sup> Counter to this logic, in some cases markets are (physically) brought to locations where a cash program is implemented. This is the case of fairs, for example, including areas where traders would not operate in the absence of the program. In such cases, cash-based transfers would be provided independently of the presence of working markets. The example of Congo discussed later in the paper falls under this category (Aker 2013).

<sup>11</sup> Note that the issue of expressing and capturing preferences is notoriously difficult to handle, including a number of factors that may distort feedback such as who conducts the survey (e.g., founder of the program), expectations by beneficiaries, etc.

<sup>12</sup> See some interesting initial guidance laid out in Ryckembusch et al. (2013), White et al. (2013), and Gelli et al. (2012).

<sup>13</sup> Mexico benefited from two distinct evaluations by Cunha (2014) and Skoufias et al. (2008).

<sup>14</sup> A new RCT is currently underway in Bangladesh, including compositions of cash, food, and nutrition training (Ahmed et al. 2013). Total sample size includes 5,000 households (4,000 of which are treated). Final results are expected to be released in late 2014.

<sup>15</sup> Cash payments were made in three disbursements: September 2011 (US\$90); November 2011 (US\$20) and February 2012 (US\$20). Program recipients had to travel to this market center to receive the cash transfer. Vouchers were provided in three installments, the first of which were commodity-based, while the last two were value-based.

<sup>16</sup> In the case of Niger, Hoddinott et al. (2014) do not report on labour market participation and assets, although their survey includes that information.

<sup>17</sup> Note that for Mexico, estimates are based on Skoufias et al. (2008) examining the same program and data as Cunha (2012). Skoufias et al. show the consumption indicator in percentages, while Cunha uses currency.

<sup>18</sup> Respondents reported a number of additional costs. For example, they indicated that on average it cost 480 FCFA (roughly 1 USD) to transport 100kg of cereals from the market to home, or otherwise 1,920 FCFA for the transfer period (four trips). This figure, however, does not take into account households' pooling transport costs, which could significantly reduce the per-household cost. The average cost for obtaining the food transfers by beneficiaries, as reported in household surveys, was only 60 CFA per trip.

<sup>19</sup> In terms of comparability, it should be noted that any transfer comparison requires some basic level of functionality in implementation conditions (e.g., in markets, delivery systems, etc.). This somewhat obscures an important advantage of food transfers, which centers on its ability to operate in more extreme circumstances (e.g., absence of markets, etc.).