

Evidence at Your Fingertips Series

Cash or In-Kind Transfers: Do Outcomes Vary According to Transfer Modality?

Summary

1. **Cash transfers in general appear to be more effective** than in-kind transfers or vouchers at improving a range of outcomes, including decreasing monetary poverty, improving health and nutrition, and increasing food security, across diverse country contexts, program objectives, and design features.
2. **However, identifying a superior modality is challenging due to the heterogeneity** in context, program design, and objectives of the studies reviewed, despite evidence generally favoring the effectiveness of cash transfers and acknowledging the enhanced effectiveness of a combination of modalities, referred to as “cash plus,” in specific cases.
3. **The cost of in-kind transfers, such as food, presents a potential limitation to the scalability of programs**, despite evidence suggesting their impact on outcomes; these transfers tend to be more expensive than cash alternatives.
4. **Health, nutrition, and food security** outcomes are overwhelmingly the focus of the transfer programs included in this review, although a few studies also assess income and wealth outcomes. Further evidence for other outcomes is needed.

Evidence Overview

Studies reviewed focused on health, nutrition, and food security outcomes, although a few examined income, assets, labor, and education (Table 1). The review also covered a wide array of contexts with evidence from

more than 10 countries ranging from Africa (e.g., Malawi) and Middle East and North Africa (e.g., Yemen) to South Asia (e.g., Pakistan) and Latin America (e.g., Mexico).

Table 1: **Overview of Included Studies: Transfer Modality Brief**

Country	Program	Scope of evaluation	Outcomes measured					
			Assets	Consumption & monetary poverty	Food Security & nutrition	Income & labor market participation	Health	Education
South Sudan	Transfers to the Ultra-Poor	Cash vs livestock	X	X				
Bangladesh	Transfer Modality Research Initiative	Cash vs food vs half cash + half food vs cash + BCC vs food + BCC			X		X	
Pakistan	Women and Children/Infants Improved Nutrition in Sindh	Cash vs vouchers					X	
Mexico	Programa de Apoyo Alimentario	Cash vs food basket			X			X
Ecuador	World Food Programme program	Cash vs food basket vs vouchers		X	X			
Rwanda	GiveDirectly	Cash vs livestock	X	X	X		X	
DRC	Social protection program	Cash vs vouchers	X	X	X			
Yemen	World Food Programme program	Cash vs food basket		X	X			
Niger	Zinder Project	Cash vs food basket			X			
Niger	Acute malnutrition program	Cash vs food vs cash + food			X		X	
Ethiopia	Productive Safety Net Program	Cash vs cash + food vs food basket	X		X	X		
Uganda	Early childhood development program	Cash vs fortified food			X		X	
Malawi	Cash and Food for Livelihoods Pilot	Cash vs food basket vs cash + food			X			

Sources: Ahmed, Hoddinott, and Roy 2019; Aker 2017; Audsley, Halme, and Balzer 2010; Avitabile, Cunha, and Meilman Cohn 2019; Chowdhury et al. 2017; Cunha, De Giorgi, and Jayachandran 2019; Cunha 2014; Gentilini 2016; Gilligan and Roy 2013; Hoddinott, Sandström, and Upton 2018; Langendorf et al. 2014; Leroy et al. 2010; McIntosh and Zeitlin 2021; Sabates-Wheeler and Devereux 2010; Schwab 2019.

Introduction

Three forms of transfer modalities are assessed in this brief: cash, voucher, and in kind. Unlike cash transfers, which allow beneficiaries to choose how to spend the transfer, in-kind transfers supply people with food, physical capital, assets, materials, or training. This review considers only a subset of in-kind transfers—those that provide a material good. Agricultural or other livelihood

training without the provision of inputs, for instance, and other types of trainings, public works programs, and subsidized goods are not included. Vouchers, also known as near-cash transfers, have characteristics of both cash and in-kind transfers; they allow for some level of choice, similar to cash, but may be restricted to specific items or shops ([Gentilini 2015](#)). This brief includes evidence from 2010 onward to encompass the breadth of research covering more than a decade (Table 1).

Key Questions

1. Do different modalities of transfers have different impacts, either at the individual or the household level?
2. Is one modality more cost-effective than the others?
3. How could the evidence regarding modalities influence the design and implementation of transfer programs?
4. What are the evidence gaps regarding the effectiveness of cash, in-kind, and voucher transfers?

Key Findings

For greater readability and comparability of modalities, the key findings for this brief are organized according to modality rather than outcome, in contrast to other briefs in this series.

Cash Transfers

Across a wide range of country contexts, program objectives, and design features, cash appears to have a greater effect on health, nutrition, food security, and economic outcomes than in-kind or voucher transfers.

In Rwanda, where child malnutrition is high, a multidimensional in-kind intervention provided seeds or livestock along with training or one of two sizes of cash transfer (McIntosh and Zeitlin 2021). The smaller cash transfer (34 percent of mean annual consumption) had no significant impact on any maternal and child health and nutrition outcomes, whereas the larger cash transfer (142 percent of mean annual consumption) had significant impacts on household dietary diversity score, height-for-age z-scores, weight-for-age z-scores, middle-upper arm circumference, and child mortality. Both cash transfers had significant impacts on consumption, savings, productive and consumption assets, and house value, whereas the in-kind transfer had a significant impact only on savings.

Two additional studies revealed the advantage of “cash plus” transfers, which provided cash and another intervention, over in-kind transfers and vouchers. In Pakistan, in combination with behavior change communication (BCC), a larger cash transfer—twice the amount of the smaller cash transfer and the voucher—reduced the odds of children being wasted at six months¹ and being stunted and reduced the risk of acute respiratory infections, fever, and malaria (Fenn et al. 2017). Although the smaller cash transfer and voucher, equally priced, reduced stunting, and the smaller transfer reduced risk of fever and malaria, neither affected the primary outcome of wasting (Fenn et al. 2017). Likewise, in Bangladesh, although cash, food, or cash plus food had no impact on children’s nutritional status, cash paired with BCC decreased chronic undernutrition, with height-for-age z-scores increasing by 0.25 standard deviations. Cash plus BCC also increased children’s energy intake, animal-source food consumption and improved childcare practices, which were likely pathways to the effects on nutritional status. In-kind food transfers paired with BCC increased energy intake but did not decrease chronic undernutrition. (See the size/value brief for further insights).

Evidence from a program in Malawi found that cash improved food security indicators, including food consumption and dietary diversity, more than standard in-kind food transfers (Audsley, Halme, and Balzer 2010). Consumption scores also increased in the cash-only group, by 23 percent more than the food group and 14 percent more than the cash plus food group. The food recipients had no significant change in dietary diversity. In addition to children’s nutritional status, one study that assessed early childhood development outcomes found cash to be the most effective modality. In Uganda, micronutrient-fortified food had no significant impacts on cognitive or noncognitive scores, whereas cash significantly increased cognitive measures for children aged three to five (Gilligan and Roy 2013). Cash generated significant improvements in children’s dietary quality and anemia status, which may

have led to the cognitive improvements, whereas food rations were likely shared with other household members, limiting the nutritional intake among target children.

In one study, cash proved more effective for certain outcomes, whereas food demonstrated greater efficacy for others (Schwab 2013). Given cash was cheaper to deliver and administer (\$4.09 [8.3 percent of the transfer value], vs \$10.37 [21.1 percent of the transfer value]) it may have an advantage over food transfers though this is dependent on the primary outcomes of interest. Cash recipients in Yemen exhibited greater dietary diversity while food recipients consumed a greater quantity of food, e.g. calories per day. The transfers also had different productive effects: in-kind food transfers encouraged nonfood production and cash recipients purchased more livestock, though study limitations prevent definitive conclusions on the productive impacts of the transfers (Schwab 2019).

In-Kind Transfers

In-kind transfers may be preferred when programs are designed to influence behaviors, such as consumption patterns, or provide basic needs in the face of crises. Evidence also suggests that in-kind transfers may facilitate targeting by inducing less-needy people to self-select out of the program by offering a good that appeals only to the intended target rather than cash, which is universally appealing (Aker 2017). Within the broader category of in-kind transfers, food is the most frequently provided according to the available literature, although there are considerable variations in the composition of food transfers based on program targeting and objectives. Programs targeting infants and young children may provide specialized foods tailored to their nutritional needs, such as lipid-based nutrients or micronutrient-fortified foods, whereas programs targeting households provide a broader range of foods. Food transfers and agricultural transfers were examined.

¹ This effect did not persist after one year.

Food Transfers

Findings from two studies that provided specialized food transfers tailored to the nutritional needs of infants and young children suggest that these transfers were not as effective as other modalities at improving nutrition. As previously mentioned, micronutrient-fortified foods had no impact on children's cognitive and noncognitive outcomes in Uganda ([Gilligan and Roy 2013](#)). A child-focused acute malnutrition program in Niger conducted during the lean season found that a transfer of supplementary food plus cash had a much stronger preventive effect on moderate acute malnutrition (half the incidence) and severe acute malnutrition (one-third the incidence) than cash or supplementary food alone ([Langendorf et al 2014](#)). Neither food nor cash alone was as effective as the combined transfer.

Other food transfers included in the review provided staples such as cereals and pulses, which anyone in the household can consume. As seen above, in most studies, food transfers were less effective than other modalities and more expensive to implement ([Cuhna 2014](#); [Hidrobo, Peterman, and Heise 2014](#); [Schwab 2019](#)), although three studies found food to be more effective. A review of Ethiopia's Productive Safety Nets Program found that food and cash plus food increased income growth, asset accumulation, and self-reported food security but food transfers (59 percent) were slightly more effective than cash plus food (45 percent) at increasing income ([Sabates-Wheeler and Devereux 2010](#)). In a study in Niger, food transfers had larger impacts on food consumption, dietary quality, and food-related coping strategies than cash transfers ([Hoddinott, Sandström, and Upton 2018](#)), but while transfer amounts were equal, implementation costs for food transfers were 15 percent more than cash. The Programa de Apoyo Alimentario in Mexico, which provided food or cash transfers, detected minimal difference in effects on overall food consumption but food transfers led to significant increases in consumption of vitamin C, iron and zinc by children and their mothers

([Cuhna 2014](#)). Four to ten years later, while in-kind transfers had no impact on standardized test scores, cash transfers resulted in lower test scores than in controls (-0.14 to -0.19 standard deviations) ([Avitabile, Cunha, and Meilman Cohn 2019](#)). Both transfers led to increased child labor, which is probably harmful to learning and thus responsible for the poor outcomes. Food transfer children's increased consumption of zinc and iron, which support brain development, likely lessened the adverse effects of child labor on learning. Similarly to the Niger evidence, food transfers in this setting have much higher distribution costs than cash (18 percent higher) ([Cuhna 2014](#)).

In Ecuador, a transfer program featuring cash, food, and vouchers was designed to address the food security and nutrition needs of poor Ecuadorian households and Colombian refugees ([Hidrobo, Peterman, and Heise 2014](#)). Food recipients had greater food consumption and per capita caloric intake, but vouchers were more effective at increasing dietary diversity. All transfers reduced controlling behaviors and physical and sexual violence equally. These findings support previous findings that, rather than one modality being superior in all cases, the most-effective modality depends largely on the outcomes of interest. That said, food transfers were far more expensive to deliver (\$11.46, vs \$2.99 to provide cash and \$3.27 to provide vouchers).

Agricultural Transfers

Of the studies reviewed, only two provided livestock or seed transfers, along with training, and both had mixed results. As noted earlier, the livestock transfer in Rwanda affected savings but not other outcomes ([McIntosh and Zeitlin 2021](#)).² With the goal of increasing asset accumulation and food security for the poorest households, a South Sudan pilot of Targeting the Ultra-Poor provided training, asset transfers (livestock), food stipends, and coaching. This was compared with unconditional cash transfers ([Chowdhury et al 2017](#)). Although both transfers

2 Consumption, nutrition (household, maternal and child), health (maternal and child), and welfare outcomes.

increased household consumption, only Targeting the Ultra-Poor significantly increased assets.³ Because agricultural assets were provided with training, it is not possible to review the impact of the asset transfer alone. Nonetheless, this reinforces that a “plus” component may have more significant effects than cash alone, particularly for poorer households.

Voucher Transfers

Vouchers fall between cash and food transfers given that they allow for some level of choice but may be restricted to a predefined set of goods. Based on the available evidence, vouchers may be inadequate to improve health, dietary diversity, and nutrition outcomes.

In a program in Pakistan, which has a high prevalence of child anemia and wasting, food vouchers could be used for specified fresh foods (fruits, vegetables, milk, meat) at specific shops (Fenn et al. 2017). The food vouchers had no effect on nutritional outcomes in children under five and did not reduce the risk of any disease. An unintended outcome was observed in the voucher arm: a negative intervention effect on mean hemoglobin, possibly because of the restrictive nature of the vouchers. Because voucher households could shop only at specific shops, what was in stock at certain times may have limited what they were able to purchase, resulting in a less-diverse selection of foods. There were also anecdotal reports that vendors overcharged for food items redeemed using the vouchers to cover administrative fees for recovering voucher costs. As such, the voucher value may have been less than the face value.

In the Democratic Republic of the Congo, vouchers could be spent only at a voucher fair on prearranged days. For the first distribution, recipients could spend the voucher

on a variety of food and nonfood items including school fees, clothing, agricultural inputs, and small animals. The second and third vouchers could be spent only on food items at the fairs. Although all items at the voucher fair were available in local markets, some items were excluded from the voucher fairs, such as meat, doughnuts, and beer. Although cash and food vouchers resulted in different purchasing decisions, this did not lead to differences in food consumption, and cash transfers were found to be more cost-effective (Aker 2017).

Implementation Considerations

Cash appears to be more cost-effective, delivering similar or better health, nutrition, and food security outcomes than in-kind or voucher transfers. Cost information was not available for all studies, but when it was, cash was the least expensive to deliver and implement. In Niger, for example, it costed \$12.91 to make each transfer to a food beneficiary, versus \$4.00 to make each transfer to a cash beneficiary (Hoddinott, Sandström, and Upton 2018). In the Democratic Republic of the Congo, vouchers were more expensive (\$14.35 per recipient, for administrative costs⁴), with cash involving only a one-time account-opening fee of \$8 per recipient (Aker 2017). In Malawi, cash was more effective than food at increasing food consumption, diversity, and threshold scores⁵, and was more cost-effective (Audsley, Halme, and Balazar 2010). Program costs to increase food security indicators by 1 percent of their baseline values are significantly lower for cash.

Context will have implications for selection and implementation of modalities. For instance, food transfers may be preferable in situations in which markets are not functioning or have limited stock and have shown more promise for increasing daily caloric intake, which may be

3 The paper estimates treatment effects for total value of assets owned, total value of potentially productive assets, as well as land and financial assets.

4 This includes staff time, materials, security, travel, and account and transfer fees.

5 A monitoring and evaluation system which describes households' food consumption level. It was designed by the International Food Policy Research Institute (IFPRI) to track changes in three food security indicators: the food diversity score; the food consumption score; and the food consumption group.

the primary outcome in emergency response. Targeted nutrition impacts may be achieved through specific supplementation to increase food consumption or caloric intake. Security is also an important factor in choosing transfer modalities. In the Democratic Republic of the Congo, cash offered the greatest security to recipients because it was more easily hidden, which reduced the potential for theft, and did not require recipients to travel long distances or wait for long periods of time to collect (Aker 2017).

Emerging Insights

1. Further research is needed to better understand the conditions under which different modalities—and their composition—are more or less effective. For instance, the composition of food transfers can significantly affect outcomes such as dietary diversity and caloric

intake. There are also gaps in assessing the effects of different modalities on outcomes other than health, nutrition, and food security.

2. If vouchers are selected, decision makers should be cautious about restricting food-based vouchers—in terms of specific foods and where vouchers can be redeemed—to ensure that a variety of food can be obtained.
3. If food transfers are selected, policy makers and implementers should consider whether specific nutritional outcomes are desired to justify the costs of implementation.
4. If cash transfers are selected, an enabling environment must be in place such that households can access available goods in the market.

References

- Ahmed, Akhter, John Hoddinott, and Shalini Roy. 2019. "Food Transfers, Cash Transfers, Behavior Change Communication and Child Nutrition: Evidence from Bangladesh". IFPRI Discussion Paper 1868. Washington, DC: International Food Policy Research Institute.
- Aker, Jenny C. 2017. "Comparing Cash and Voucher Transfers in a Humanitarian Context: Evidence from the Democratic Republic of Congo." *World Bank Economic Review* 31(1): 44-70.
- Audsley, Blake, Riikka Halme, and Niels Balzer. 2010. "Comparing Cash and Food Transfers: A Cost-Benefit Analysis from Rural Malawi." In *Revolution: From Food Aid to Food Assistance, Innovations in Overcoming Hunger*, edited by Steven Were Omamo, Ugo Gentilini, and Susanna Sandström, 89-102. Rome, Italy: World Food Programme.
- Avitabile, Ciro, Jesse M. Cunha, and Ricardo Meilman Cohn. 2019. "The Medium Term Impacts of Cash and In-Kind Food Transfers on Learning." Policy Research Working Paper No. 9086. World Bank, Washington, DC.
- Chowdhury, Reajul, Elliott Collins, Ethan Ligon, and Munshi Sulaiman. 2017. "Valuing Assets Provided to Low-Income Households in South Sudan." <https://bracupgi.org/wp-content/uploads/2022/08/Valuing-Assets-Provided-to-Low-Income-Households-in-South-Sudan.pdf>.
- Cunha, Jesse M. 2014. "Testing Paternalism: Cash Versus In-Kind Transfers." *American Economic Journal: Applied Economics* 6 (2): 195-230.
- Cunha, Jesse M., Giacomo De Giorgi, and Seema Jayachandran. 2019. "The Price Effects of Cash Versus In-Kind Transfers." *Review of Economic Studies* 86 (1): 240-81)
- Fenn, Bridget, Tim Colbourn, Carmel Dolan, Silke Pietzsch, Murtaza Sangrasi, and Jeremy Shoham. 2017. "Impact Evaluation of Different Cash-Based Intervention Modalities on Child and Maternal Nutritional Status in Sindh Province, Pakistan, at 6 Mo and at 1 Y: A Cluster Randomised Controlled Trial." *PLoS Medicine* 14 (5): e1002305.
- Gentilini, Ugo. 2015. "Revisiting the "Cash Versus Food" Debate: New Evidence for an Old Puzzle?" *World Bank Research Observer* 31 (1): 135-67.
- Gentilini, Ugo. 2016. *The Other Side of the Coin: The Comparative Evidence of Cash and in-Kind Transfers in Humanitarian Situations?* Washington, DC: World Bank.

- Gilligan, Daniel O., and Shalini Roy. 2013. "Resources, Stimulation, and Cognition: How Transfer Programs and Preschool Shape Cognitive Development in Uganda." 2013 Agricultural and Applied Economics Association Annual Meeting, August 4-6, 2013, Washington, DC.
- Hidrobo, Melissa, Amber Peterman, and Lori Heise. 2016. "The Effect of Cash, Vouchers, and Food Transfers on Intimate Partner Violence: Evidence from a Randomized Experiment in Northern Ecuador." *American Economic Journal: Applied Economics* 83: 284-303.
- Hoddinott, John F., Susanna Sandström, and Joanna Upton. 2018. "The Impact of Cash and Food Transfers: Evidence from a Randomized Intervention in Niger". IFPRI Discussion Paper 1341. Washington, DC: International Food Policy Research Institute. <http://ebrary.ifpri.org/cdm/ref/collection/p15738coll2/id/128125>
- Langendorf, Céline, Thomas Roederer, Saskia de Pee, Denise Brown, Stéphane Doyon, Abdoul-Aziz Mamaty, Lynda W-M. Touré, Mahamane L. Manzo, and Rebecca F. Grais. 2014. "Preventing Acute Malnutrition Among Young Children in Crises: A Prospective Intervention Study in Niger." *PLoS Medicine* 11 (9): e1001714.
- Leroy, Jef L., Paola Gadsden, Sonia Rodriguez-Ramirez, and Teresa Gonzalez de Cossío. 2010. "Cash and In-Kind Transfers in Poor Rural Communities in Mexico Increase Household Fruit, Vegetable, and Micronutrient Consumption but also Lead to Excess Energy Consumption." *Journal of Nutrition* 140 (3): 612-7.
- McIntosh, Craig, and Andrew Zeitlin. 2021. "Cash versus Kind: Benchmarking a Child Nutrition Program against Unconditional Cash Transfers in Rwanda." Cornell University, Ithaca, NY. <https://arxiv.org/abs/2106.00213>.
- Sabates-Wheeler, Rachel, and Stephen Devereux. 2010. "Cash Transfers and High Food Prices: Explaining Outcomes on Ethiopia's Productive Safety Net Programme." *Food Policy* 35 (4): 274-85.
- Schwab, Benjamin. 2013. "In the Form of Bread? A Randomized Comparison of Cash and Food Transfers in Yemen." *American Journal of Agricultural Economics* 102 (1): 91-113.
- Schwab, Benjamin. 2019. "Comparing the Productive Effects of Cash and Food Transfers in a Crisis Setting: Evidence from a Randomised Experiment in Yemen." *Journal of Development Studies* 55 (sup1): 29-54.
- Trako, Iva and Dahyeon Jeong. 2022. "What Do We Know about Cash and In-Kind Transfers in Humanitarian Settings? Not Enough." *Let's Talk Development. World Bank Blogs*. September 20. <https://blogs.worldbank.org/developmenttalk/what-do-we-know-about-cash-and-kind-transfers-humanitarian-settings-not-enough-0>.

Evidence at Your Fingertips Series

This note is part of thematic briefs in the series including:

- Evidence Briefs on Cash Transfers: Overview and Ten Key Messages
- Cash Transfer Size: How Much Is Enough?
- Cash Transfer Timing: How Transfer Duration and Frequency Contribute to Outcomes
- Cash Transfer Payment Mechanisms: Do Outcomes Vary According to Payment Mechanism?
- Can Safety Nets Reduce Gender-Based Violence? How?

The series is launched with that aim that these be living documents. In that spirit, the team welcomes suggestions on materials and topics to be covered in the future series that can serve as useful, practical references for practitioners of social protection.

The series is a joint initiative by Innovations for Poverty Action and the World Bank's Social Protection and Jobs Global Practice comprising Nathanael Goldberg, Lauren Whitehead, Savanna Henderson, Ana Alatrisme Tamayo, Julie Kedroske, Ugo Gentilini, Yuko Okamura, Mohamed Almenfi, Hrishikesh TMM Iyengar, and Mia Blakstad. For any questions regarding this brief, please reach out to socialprotection@poverty-action.org and ugentilini@worldbank.org

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