Social protection and resilient food systems: The role of cash transfers

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Abbreviations

BDH	*Bono de Desarrollo Humano*
BMI	Body Mass Index
BONOSOL	*Bono Solidario*
CCT	Conditional Cash Transfer
CESSP	Cambodia Education Sector Support Project
DECT	Dowa Emergency Cash Transfer
EDR	Emergency Drought Relief
FCS	Food Consumption Score
FFV	Fresh Food Vouchers
GAM	Global Acute Malnutrition
IDDS	Individual Dietary Diversity Scores
IYCF	Infant and Young Child Feeding
MUAC	Mid-upper Arm Circumference
OAP	Old Age Pension
PRAF	*Programa de Asignación Familiar*
RPS	*Red de Protección Social*
SFP	Supplementary Feeding Programme
UCT	Unconditional Cash Transfer
ZECT	Zimbabwe Emergency Cash Transfer

Executive summary

Global food price spikes and limited household purchasing power in the face of sustained poverty have reoriented international policy attention once again to the problems of food insecurity. Cash transfers – a form of social protection which includes conditional or unconditional income transfers to poor households – have been increasingly used as a tool for reducing poverty and vulnerability in middle and low-income countries over the past decade. More recently, cash transfers have also been used as an alternative to food aid in humanitarian contexts. In this paper we assess the extent to which cash transfer programmes can support a resilient food system. Such a system is understood to encompass four pillars: (i) increasing food availability, (ii) improving food access, (iii) improving nutritional adequacy of food intake and (iv) enhancing crisis prevention and management. In particular, availability refers to both production and what can be acquired through markets, whether national or international; access includes the ability to purchase food, but also to obtain it as part of informal (e.g. within-household) or formal (e.g. food aid or regular food transfers) entitlements; improved utilisation of food depends on improvements in diet, but also on improved nutritional knowledge, good sanitation and health; and crisis prevention aims to maintain food across the three pillars above in the context of crises and emergencies.

Through increasing household income, cash transfers can theoretically contribute to all four pillars of a resilient food system. Increased household income can increase **food availability** if it is invested in increasing agricultural production and productivity, through for example, lifting credit constraints that farmers face and facilitating the purchase of seeds, fertiliser and other agricultural inputs; increased household income can also increase demand for goods at the local level, stimulating a market supply response. However, few cash transfer programmes have an explicit objective to enhance agricultural productivity and as such, few have been assessed on their impact on increasing productivity or on their effects on markets. Three studies from Latin American CCTs in Mexico and Nicaragua do find however some positive impacts on agricultural productivity. PROCAMPO in Mexico (targeted to farmers) reports positive multiplier effects and 12 % of transfers to beneficiaries are invested in productive assets in the case of Mexico's Progresa – the transfer allowed beneficiaries to overcome credit constraints and take on more risky investments. Evidence from Nicaragua however showed little investment in agricultural equipment. The authors note that in this case the context is important to consider as the study was conducted during the economic downturn in Nicaragua and in rural areas with limited opportunities. Moreover, programme orientation matters as we find that RPS in Nicaragua was focused towards food expenditures, Progresa towards human capital development, whereas PROCAMPO focused on agriculture.

There is some evidence that cash transfers have a positive effect on food markets (South Africa, pensions) by stabilising demand for food and reducing market risk for producers and traders. Evidence from these programmes tends to be longer-term predictable transfers to households (such as pensions). However, one study from Ethiopia also found that cash transfers can have a negative effect, pushing up food prices in remote food-deficit areas.

Increased household income can also increase **access to food** directly by enabling households to purchase food, increasing calorie consumption, and more indirectly by investing income in subsistence farming, through for example, agricultural inputs. There is strong and consistent evidence that cash transfers increase household access to food, increasing household actual and share of expenditure on food: for the poorest households, a 10% increase in income can improve household food security by 5%, as measured by calories available for consumption (HLPE, 2012). Evidence suggests that the size of the transfer and programme orientation matters: where programmes have not increased food access, small transfers and lack of short-term poverty alleviation goals are key factors. It is also important to note that once access to calories reaches some threshold level, attention switches to food quality and household caloric acquisition may continue to rise but at a much slower rate. As such, households diversify their diet, increasing their consumption of fruits, vegetables and animal products (HLPE, 2012: 46).

There is much less evidence on the role of cash transfers contributing to increased subsistence production. The main evidence here comes from BONOSOL in Bolivia which increased food consumption by almost 165% of the value of the transfer because part of the transfer was invested in agricultural inputs. Important programme features to note here are the timing of transfers (once a year); the level of transfer (large – at US$246) and its targeting (to pensioners with land).

Increased household income can also increase **food utilisation** and nutrition directly by improving the quality and diversity of diet, resulting in improved stunting, wasting and BMI indicators. Cash transfers which are implemented as part of broader package of interventions, such as CCTs which link beneficiaries to health care, knowledge and information on health and nutrition, and / or nutritional supplements also have the potential to address the other causes of malnutrition, such as disease, behaviour, knowledge gaps and intra-household inequalities (particularly through women's empowerment).

There is strong evidence from Latin America and Africa that cash transfers improve the quality and diversity of diet. A number of programmes have resulted in reducing stunting and wasting indicators (Latin America, South Africa, Malawi). However, it is also important to note that a number of programmes have not improved nutritional status (as measured by anthropometric indicators). The literature suggests that positive results are a result of the following factors: the size of transfer (although we are still unclear of specific thresholds); the length of beneficiary programme participation (where better impacts are found when beneficiaries have been in the programme for longer); the age of recipient (targeting young children results in better child nutrition indicators); and the availability of nutritional supplements (although this is the case in Mexico but not in Nicaragua, suggesting other factors such as health status are important).

The evidence on CCTs in particular, where cash transfers are implemented as part of a wider programme of interventions suggests that other programme activities, such as social marketing campaigns, nutritional education and women's empowerment, are important. However, we don't have concrete evidence as to the extent that these factors contribute to improved outcomes as opposed to the other programme components.

Finally, cash transfers can help minimise the negative impacts of **crises and emergencies** by smoothing income and therefore consumption. However, maintaining the purchasing power of cash transfers in the context of volatile markets is a key challenge. We know relatively little about the role of long-term cash transfers in dealing with economic downturns or crises although evidence from Nicaragua and Mexico do suggest that they help smooth consumption in the face of income fluctuations. We know more about short-term cash transfers in emergency contexts, although methodologically, capturing and attributing impacts can be even more difficult in humanitarian contexts. However, evidence across a number of emergency cash transfer programmes suggest that transfers can help increase access to food, in particular expenditure on food items, and also utilisation through diversity of diet and better quality food. There is also some evidence of positive outcomes on children's nutrition through complementary cash transfers and therapeutic feeding (as an incentive to ensure children receive the supplements) and behaviour change as a result of combining awareness raising on nutrition education.

Overall, it is important to consider the context in which cash transfers are operating– especially where cash transfers lose their purchasing power in the face of food price spikes. Two options are discussed in the literature to overcome these challenges: i) index-linked cash transfers; and ii) transferring combinations of food and cash (or just transferring food, or just vouchers).

1 Introduction

Cash transfers – a form of social protection – have been increasingly used as a tool for reducing poverty and vulnerability in middle and low-income countries over the past decade. More recently, cash transfers have also been used as an alternative to food aid in humanitarian contexts.

Global food price spikes and limited household purchasing power in the face of sustained poverty have reoriented attention once again to food insecurity. Understanding the causes of food and nutrition insecurity beyond issues of availability have led to the identification of four pillars which encompass a resilient food system: (i) increasing availability, (ii) improving access, (iii) improving nutritional adequacy of food intake and (iv) enhancing crisis prevention and management. In particular, availability refers to both production and what can be acquired through markets, whether national or international; access includes the ability to purchase food, but also to obtain it as part of informal (e.g. within-household) or formal (e.g. food aid or regular food transfers) entitlements; improved utilisation of food depends on improvements in diet, but also on improved nutritional knowledge, good sanitation and health; and crisis prevention aims to maintain food across the three pillars above in the context of crises and emergencies.

The objective of this paper is to identify how far cash transfers can contribute to more resilient food systems. It does this by examining the theoretical pathways by which cash transfers can contribute to each of the four pillars, and then discusses the evidence from a range of cash transfer programmes to assess how far the theoretical claims contribute in practice. It then assesses the key design, implementation and contextual factors that affect these pathways. The paper concludes with policy implications.

2 Cash transfers: aims and objectives

There are two main types of cash transfers discussed in this paper: conditional and unconditional cash transfers (public works programmes are discussed in McCord, 2013).

Conditional cash transfers focus on human capital development and target households with children of a certain age (usually primary or secondary school age). Conditional cash transfer programmes (CCTs) have spread across the world, notably in Latin America but also in South and East Asia. CCTs have three defining characteristics: (1) they target poor regions and identify poor households within those regions that will receive benefits; (2) they provide cash (and sometimes in-kind transfers such as nutritional supplements) usually to the mother or primary caregiver; (3) in order to receive these transfers, recipients must commit to undertaking certain actions. The most common condition is enrolling children in school and maintaining adequate attendance levels. In some countries, attendance at pre- and postnatal health-care appointments, and ensuring that pre-school children receive vaccinations, growth monitoring and regular checkups, are required (Adato and Hoddinott, 2010). A critical feature of CCTs, therefore, is the attempt to balance two policy objectives in relation to food security: to improve the immediate consumption levels and nutrition status of poor families, and to raise the human capital of poor children in the long-term. As such, CCTs aim to reduce both short-term food insecurity and the long-term intergenerational transmission of poverty and vulnerability (HLPE, 2012).

Unconditional cash transfers on the other hand also often target households with children, but also target the elderly (pensions) and disabled (as such, the “non-productive poor”). Such programmes largely include government-run social grant programmes for vulnerable groups, as well as small-scale pilot projects usually financed by donor agencies and implemented by NGOs. Unconditional cash transfers are more popular in Africa for a number of reasons, including the fact that social services are generally weaker in sub-Saharan Africa than in Latin America, and well-functioning education and health services are necessary for conditions to be effective (HLPE, 2012). A less common objective of regular unconditional cash transfers are programmes which seek to explicitly improve productivity. An exception is Procampo which specifically targeted farmers, however this programme is no longer running.

3 Contribution of cash transfers to resilient food systems: theory and evidence

3.1 Conceptual framework and evidence on linkages between cash transfers and resilient food systems

In theory cash transfers can contribute to a resilient food system in a variety of ways (see Table 1). A framework for understanding the dimensions of food security relate to food availability, access, utilisation and crisis prevention and management.

Across these four pillars, cash transfers are most likely to have the largest contribution in relation to household "access" and "utilisation", through the direct increase in household income which can be spent on increasing the quantity of food consumed and improving the quality and diversity of diet. The possible contributions of cash transfer programmes and cash transfer packages (e.g. CCTs) to the food security system are illustrated in Table 1 and discussed in more detail with the available evidence below.

Table 1: Theoretical role of cash transfers in supporting a resilient food system

Components of a resilient food system	Role of cash transfers
Food availability	
• Production and productivity	Cash transfers can facilitate investment in agricultural inputs, relieve credit constraints, allow more (and fitter) labour to engage in agriculture
• Markets	Cash transfers can increase demand for food and stimulate local supply of food
Food access	
• Increased income	Cash transfers directly increase household income, enabling access to increased quantity of food if available on market
• Increased household production	Cash transfers can increase subsistence production by investing cash income in agricultural inputs
Food utilisation	
• Increased income	Cash transfers directly increase household income, enabling improved diversity and quality of diet
• Existing health status	Cash transfers can increase expenditure on health services, and, if linked to complementary services (e.g. CCTs) increase uptake of health services, immunisation etc. and decrease the likelihood of diseases
• Caring practices	Cash transfers, if linked to complementary awareness and training services, such as education, health and nutrition, can improve caring practices for children
• Improved intra-household decisions and resource allocation	Cash transfers can increase women's economic status and decision-making within the household, leading to increased nutritious food intake within the household
• Water and sanitation	If linked to education and awareness raising cash transfer programmes can improve water and sanitation hygiene practices.
Crisis prevention and management	
• Smoothing income and consumption	Cash transfers can smooth household income and therefore consumption in times of crisis, but maintaining the purchasing power of cash in such contexts can be a challenge

When looking at the evidence on the way in which cash transfer programmes actually affect food security and nutrition outcomes and impacts it is important to distinguish between outputs, outcomes and impacts of cash transfer programmes. These are presented in Table 2. There are numerous studies to draw from across the cash transfer literature, but varying methodological rigour has been applied to studies. The most methodologically robust studies come from conditional cash transfers in Latin America, but we also draw on other impact evaluations (noting methodological limitations where possible). The findings tend to suggest that almost all cash transfer programmes have a positive effect on outcomes (such as increasing the number of meals a day, or improving the quality of diet), but there are mixed findings on impacts (e.g. reduction in wasting, where weight-for-height provides insights into the short-term impact of improved nutrition, and stunting, where height-for-age provides information on the long-term effects of improved nutrition and Body Mass Index (BMI) indicators). We explore the reasons behind these findings in section 4 of the paper after discussing the extent to which the evidence supports the theoretical assumptions on the role of cash transfers contributing to food secure systems by looking at the outcomes and impacts below.

Table 2: Cash transfer programmes - inputs, outputs, outcomes and impacts

Inputs →	Outputs →	Outcomes →	Impacts
Cash transfer Cash transfer "plus" e.g. complementary health care, nutrition knowledge	Increased household income Awareness on nutrition Access to health care	Increased quantity and diversity of diet (e.g. consumption of calories, more nutritious food) Increased knowledge put into practice (e.g. appropriate types of food) Utilisation of health care	Improved BMI, reduced stunting and wasting

3.2 The role of cash transfers in promoting food availability

Cash transfer programmes can potentially contribute to food availability through two main mechanisms: first, through **increasing productivity and production** by stimulating local agricultural production and non-agricultural activities (e.g. employment) (HLPE, 2012), and second, cash transfers can affect local **markets** by generating increased demand that can, in turn, trigger a supply response by local producers (Slater, 2009 cited in DFID, 2011).

Increased productivity and production

Few studies, however, have examined the impacts of cash transfers on productivity and markets (FAO et al., 2012). Barrientos and Scott (2008) assessed the evidence of the impacts of cash transfers on growth and found little effect of cash transfers on aggregate growth at national levels, but some at the household level (as expected). While there may be some overlap here between availability and access at the household level, some evidence does show positive impacts of cash transfers on production and stimulating markets (and also some negative effects). In sub-Saharan Africa, the Malawi social cash transfer programme was found to lead to increased investment in agricultural assets, including crop implements and livestock. Also reported were increased satisfaction of household consumption by own production, decreased agricultural wage labour and child work off farm, and increased labour allocation to on farm activities by both adults and children (FAO et al., 2012).

Some studies have also observed increases in agricultural investment by beneficiary households under PROGRESA (now Oportunidades) compared to non-beneficiaries. Gertler et al. estimates that, on average, around 12 percent of transfers to beneficiaries were invested in productive assets. They suggest that the CCT helped alleviate two market failures. First, the increased income allowed households to overcome credit constraints. Second, the reliability of regular income may have made households willing to undertake more risky (and profitable) investments (Gertler et al 2006). Sadoulet, de Janvry and Davis (2001) who compared transfers under PROGRESA and PROCAMPO - the latter being a production-focused transfer to owners of small farms -, found that the latter had income multipliers of around 1.5 to 2.6. (Barrientos and Scott, 2008). Another study (Maluccio 2008) assesses the impact of the Red de Protección Social (RPS) programme in Nicaragua on various types of investments. The author finds only limited evidence that the programme led to

an increase in investment for agricultural equipment, possibly because of an economic downturn during the period, the strong programme orientation toward increased food expenditures, and the limited opportunities in the impoverished rural areas where the programme operated (Fiszbein and Schady, 2009).

Markets

The impacts of cash transfers on markets are mixed. Samson et al., (2007) found that in remote areas of South Africa, cash transfers stabilised the demand for food, reduced market risk for producers and traders, and supported local agricultural production (Samson et al., 2007 cited in DFID, 2011). Similar findings were reported from a qualitative assessment of the social pension in Namibia, which also improved market access to food, by attracting traders to remote communities and enabling pensioners to buy food on credit (Devereux, 2002 cited in HLPE, 2012). However, where markets are not able to respond to increased demand by increasing supply, cash transfers can have a negative impact by pushing up local prices. In Ethiopia, Kebede (2006) reported that the Meket Livelihoods Programme, which shifted from food- to cash-based transfers, had negative implications for the availability and price of food in local markets, especially in remote, food-deficit areas (Kebede, 2006 – DPR) (DFID, 2011).

3.3 The role of cash transfers in promoting access to food

In theory, cash transfers can support household access to food in a variety of ways. First, cash transfers directly increase income which can be spent on **increasing the quantity of food** consumed. For the poorest households, a 10% increase in income can improve household food security by 5%, as measured by calories available for consumption (HLPE, 2012). However, once access to calories reaches a threshold level, attention switches to food quality and household caloric acquisition may continue to rise but at a much slower rate. As such, households diversify their diet, increasing their consumption of fruits, vegetables and animal products (HLPE, 2012: 46) – these are discussed in the sub-section on utilisation below. In addition, predictable income can help prevent negative responses to food insecurity, for instance skipping meals.

Second, cash transfers can be invested in agricultural inputs and resources**, increasing agricultural production for household consumption**. In particular, regular and reliable transfers can alleviate credit constraints faced by farmers, as well as provide greater certainty and security which enables higher-risk, higher-return investments, leading to a more efficient use of resources (Barrientos and Scott, 2008; HLPE, 2012; FAO et al., 2012).

Increased household expenditure

Turning to the availability of evidence to support the theoretical claims above, we start with the evidence that cash transfers directly increase expenditure on food. A review of the evidence on cash transfers by DFID (2011) found that "one of the strongest and most consistent findings regarding the impact of cash transfer programmes is their contribution to reducing hunger and food insecurity. Regardless of the form of transfer, households receiving transfers average significantly higher spending on and consumption of food. The impact of cash transfers on hunger has been most pronounced in LICs where poverty is generally more severe. In these settings, households receiving additional income are particularly likely to prioritise spending on improving the quantity and or/quality of food consumed" (DFID, 2011: 20).

For instance, evaluations from Malawi's Cash Transfer programme and CCTs in Latin America show cash transfer beneficiary households prioritising increased income on food goods, increasing the quantity of food and leading to increased calorie consumption (see Box 1).

However, some evaluations do not find such positive results. The Bono de Desarrollo Humano (BDH) programme in Ecuador and the Cambodia Education Sector Support Project (CESSP) for instance do not show improvements in increased consumption levels. The results for the CESSP programme are not unexpected, given the small size of the transfer and the fact that short-term poverty alleviation was not a programme goal (cited in Fiszbein and Schady, 2009) (these issues are discussed in more detail in section 4 below).

Box 1: **Cash transfers support increased expenditure on quantity of food**

An evaluation of Malawi's Cash Transfer programme, showed that around 75 percent of the transfer was spent on groceries (Vincent and Cull, 2009) and a synthesis of findings from surveys in sub-Saharan Africa found that the primary use of cash transfers was to purchase food in six out of the seven programmes reviewed (Adato and Bassett, 2008).

Evidence from CCTs in Latin America also shows similar results. Studies find that for a given level of total household expenditure, beneficiary households tend to consume a larger proportion of food. For example, the food share is about 4 percentage points higher among programme beneficiaries in Colombia, Ecuador, and Nicaragua than among non-beneficiaries. In addition, insofar as CCT programmes affect total consumption, the effect on the level of food expenditures (as opposed to the share) can be considerable. In Mexico, for example, the median value of food consumption was 11 percent higher for beneficiary households than for comparable control households, and the median caloric consumption had increased by 8 percent (Hoddinott, Skoufias, and Washburn 2000). The increase in expenditures on food generally is directed toward increasing quality (discussed in the next sub-section on utilisation below).

There is also evidence from a number of cash transfer programmes that increased expenditure leads to increased calorie consumption. Impacts on per capita consumption are found from a range of CCTs in Latin America. For instance, the RPS in Nicaragua (a programme that makes relatively large transfers) increased per capita consumption by up to 29.3%; Familias en Acción in Colombia, Oportunidades in Mexico, Programa de Asignación Familiar (PRAF) in Honduras, and Bolsa Alimentação in Brazil also had significant impacts on per capita consumption, ranging from 7 to 10 percent.

Increased production of subsistence agriculture

There is some empirical evidence which supports the argument that cash transfers can increase subsistence agricultural production.

Households receiving South Africa's Child Support Grant, for instance, have demonstrated greater resiliency in terms of maintaining agricultural production (EPRI, 2011 cited in DFID, 2011). In Bolivia, beneficiary households of the social pension, BONOSOL, in poor rural areas experienced an average increase in food consumption of almost 165% of the value of the transfer. This was achieved through the investment of part of the transfers in agricultural inputs. It is important to note that the pension is paid *once a year* to persons aged 65 and over, and at US$246, it represents a significant injection of liquidity for rural farmers who have land but no cash or credit to purchase seeds and other agricultural inputs (HLPE, 2012; Martinez, 2007 cited in Barrientos and Scott, 2008).

3.4 The role of cash transfers in promoting the utilisation of food

The third component of the resilient food system is utilisation. Achieving food security in the short term requires household or individual access to a diverse and quality diet - which is not only determined by direct access to food through production or income, but also determined by intra-household dynamics, such as women's status in the household as well as linkages to basic health care services, clean water and sanitation, and appropriate information, education and skills training to ensure that the food will also be utilised effectively in safe and wholesome daily diets for nutritional health and wellbeing (HLPE, 2012).

Cash transfers can directly improve the quality and diversity of diet through increased household income. Cash transfers can also contribute to improved decision-making and allocation of food within the household. Unequal decision-making, women's lower status in the household, and limited knowledge about nutrition lead to inefficiencies in the types of food consumed and allocated within the household. Transferring cash transfers to women in the household can improve household dynamics, with a shift in consumption to child-related goods and services and more efficient resource allocation (Barrientos and Scott, 2009) – however, the impacts of CCTs on food security and nutrition are rarely evaluated from a specific gender perspective. In relation to the other dimensions under food utilisation, cash transfers are likely to play a limited role here (e.g. household expenditure spent on healthcare, soap and hygiene products), unless they are implemented as part of a package which includes access to complementary services and programmes, such as health care, awareness raising and education on e.g. nutrition, health practices etc (and even then the quality of these additional services is a key determinant of outcomes). Even unconditional cash transfers are sometimes implemented as a package (for example with awareness raising activities) or with conditions attached which include providing training and information sessions, such as nutrition education. A cash transfer might also free women's time by reducing the need to pursue income-generating activities outside of

the home or to move in search of work (but conversely if conditions are attached to the cash transfer or travel time to collect the transfer is long, it may increase women's "time poverty").

There is evidence to support the claim that cash transfers can lead to a more diverse and so better quality diet. The Kalomo District Pilot Social Cash Transfer Scheme in Zambia, for instance, significantly improved the diets and nutritional status of beneficiaries – consumption of fats, proteins and vitamins increased, and households living on one meal a day fell from 19% to 13% (MCDSS and GTZ 2006).

The increase in expenditures on food as seen from the Latin American examples above (in the access sub-section) is generally directed toward increasing quality (for more detail see Box 2), including increased consumption of food rich in protein as well as fruits and vegetables, and generally improved diversification of food stuffs.

Box 2: **Cash transfers support improved quality of food consumption**

Households that benefited from Familias en Acción in Colombia significantly increased items rich in protein, such as milk, meat, and eggs (Attanasio and Mesnard 2006); and the increases in food expenditures in Mexico and Nicaragua were driven largely by increased consumption of meat, fruits, and vegetables (Hoddinott, Skoufias, and Washburn 2000; Maluccio and Flores 2005).

Oportunidades also increased caloric diversity as measured by the number of different foodstuffs consumed. At similar overall food expenditure levels in Nicaragua, Macours, Schady, and Vakis (2008) show that households that receive transfers from the Atención a Crisis programme spend significantly less on staples (primarily rice, beans, and tortillas) and significantly more on animal protein (chicken, meat, milk, and eggs), as well as on fruits and vegetables. Angelucci and Attanasio (2008) report similar results using data for urban Oportunidades in Mexico. Not only did households diversify their diets; they also shifted toward higher-quality sources of calories (cited in Fiszbein and Schady, 2009).

However, there is not a clear impact pathway from cash transfers, increased expenditure on food stuffs and better quality diet to final wasting, stunting and malnutrition rates[1]. Table 3 summarises the available evidence from some of the main programmes discussed above. It shows that while there is evidence which demonstrates positive impacts on reductions in stunting and some evidence on reductions in wasting and other indicators of malnutrition, a few studies also show no impacts on stunting and malnutrition[2]. Some programmes may have an impact on one indicator, but not on another, such as Ecuador's BDH and Nicaragua's RPS. Furthermore, one study shows a negative impact. These impacts are discussed in more detail after the Table below.

Table 3: Summary of nutrition and health impacts by cash transfer programme

Type of effects / Impact indicators	Positive impact	No impact	Negative impact
Stunting	South Africa's child grant Malawi's UCT Mexico's Oportunidades (CCT) Nicaragua's RPS (CCT) Colombia's Familias en Acción (CCT)	Nicaragua's Atención a Crisis (CCT) Honduras' PRAF (CCT) Ecuador's BDH Colombia's Familias en Acción (CCT)	Brazil's Bolsa Alimentação

[1] These indicators are used to in the cash transfer literature. There is little attention to cash transfer programmes impact on adult nutrition, such as BMI, or women's nutrition status, such as measurements of anaemia.

[2] All impacts reported here are short-term. Only one study has attempted to investigate the somewhat longer-term effects of transfers on child height, and it finds no evidence that the positive impacts that had been observed initially were sustained over time (Neufeld et al. 2005 cited in Fiszbein and Schady, 2009).

Type of effects / Impact indicators	Positive impact	No impact	Negative impact
Wasting	Malawi's UCT		Brazil's Bolsa Alimentação
"Malnutrition" and other indicators, anaemia levels	Nicaragua's RPS Brazil's Mexico's Oportunidades Ecuador's BDH	Mozambique's UCT Nicaragua's RPS Honduras's PRAF	

Stunting and wasting indicators

There are two types of impacts on stunting discussed in the cash transfer literature. The first is based on econometric analyses which use simulations to predict impacts on child height. In South Africa, for instance, econometric analysis of anthropometric survey data estimates that a boy receiving the Child Support Grant in early childhood (specifically, for two thirds or more of the first three years of life) obtains an increase in height-for-age at age three which can be expected to result in an average 3.5 cm gain in height as an adult (Aguëro et al., 2007).

The second is actual impact evaluations. Here, there is evidence from both unconditional and conditional programmes that cash transfers reduce child stunting (see Box 3 for evidence from additional countries). In South Africa, for instance, children in families receiving a pension have on average 5cm greater growth than children in families without a pension (Case, 2001 cited in Yablonski and O'Donnell, 2009). Duflo (2003) also finds an important gender-difference, that girls whose grandmothers receive transfers have large improvements (about 1.2 standard deviations) in weight and height (Duflo, 2003). And studies on Mexico's Oportunidades report an estimated programme impact on child height of approximately 1 cm for some children (Behrman and Hoddinott, 2005; Gertler, 2004; and Rivera et al., 2004 cited in Fiszbein and Schady, 2009). Behrman and Hoddinot (2005) attribute the reduction in the probability of stunting and actual increased child growth (by approximately one-sixth) to the linking of cash transfers to the distribution of nutritional supplements (cited in HLPE, 2012) (discussed in more detail in section 4 below).

Box 3: Cash transfers support reduction in child stunting and wasting rates

In Malawi, an evaluation of the Mchinji Social Cash Transfer Scheme pilot project found that the proportion of children in beneficiary households whose growth was stunted fell from 55% to 46% in one year, but remained at 55% in the control group. The programme effect – the reduction in stunting attributable to the cash transfers – was 9 percentage points (Miller et al., 2011 cited in HLPE, 2012). This study also found that the proportion of children who were wasted more than halved over the year, from 16.2% to 7.2% in beneficiary households, but also fell significantly, from 13.7% to 6.9% in non-beneficiary households, leaving an attributable 'difference in differences' of 2.2 percentage points (Miller et al., 2011 cited in HLPE, 2011).

In Nicaragua, Maluccio and Flores (2005) find that the RPS increased the height-for-age Z score for children younger than 5 years of age by approximately 0.17 points.

In Colombia, Attanasio et al. (2005) evaluate the impact of Familias en Acción and find that the Z scores of treated children younger than 2 years of age improved by 0.16 points, implying a 7–percentage point reduction in the probability of stunting. However, they find no programme effects on child height for children aged 3–7 years at baseline, suggesting that age is an important determinant of final impacts.

A number of evaluation studies have also found, however, that cash transfer programmes (conditional and unconditional) have had no impacts on stunting rates. Macours, Schady, and Vakis (2008) find no effect of the Nicaragua Atención a Crisis programme on child height among children of any age group. In Ecuador, the BDH programme does not appear to have improved child height among children of any age group (Paxson and Schady 2008). In Honduras, Hoddinott (2008) finds PRAF had no effect on child height. The small size of the transfers and the lack of complementary services are argued to account for the lack of a programme effect on nutrition (Ibid; Yablonski and O'Donnell, 2009). Similarly, an unconditional cash transfer programme in Mozambique showed little or no impact on nutrition, also thought to be attributable to low

value of the transfer (£1.2 to £2.4 a month, less than a third of household expenditure)(Yablonski and O'Donnell, 2009 cited in DFID, 2011).

One study from Brazil's Bolsa Alimentação CCT programme actually found a borderline-significant negative effect on height for age as well as a significant negative impact on weight for age (Morris, Olinto et al. 2004). The authors of the study found that negative programme effects occurred despite the fact that the programme appears to have increased the availability of nutritious foods in the household. The authors suggest that this may be a result of perverse incentives where because an earlier programme (Incentivo para o Combate de Carencias Nutricionais) made powdered milk available to mothers if their children were underweight, beneficiaries of Bolsa Alimentação may have believed that their children needed to be underweight to qualify for transfers (cited in Fiszbein and Schady, 2009).

Malnutrition and other indicators

A number of evaluation studies have also looked at the impact of cash transfers on malnutrition and other indicators, including haemoglobin levels and anaemia. Again, some programmes demonstrate positive impacts, while other programmes show no significant impacts on these indicators. In Nicaragua, an evaluation of the RPS demonstrated that after two years children in households receiving transfers experienced a reduction in malnutrition 1.7 times greater than the national trend (longitudinal survey, Maluccio and Flores, 2004) (cited in DFID, 2011). In Brazil, Bolsa Familia registered a reduction in chronic malnutrition by an estimated 30% among children under 6 years old and by 62% for infants aged 6-11 months (Grosh et al., 2008; ILO, 2009) (cited in HLPE, 2012). A study by Gertler (2004 cited in Fiszbein and Schady, 2009) estimates that children exposed to the Oportunidades programme were 26 percent less likely to be anaemic after the first year than were children not exposed to it.

While the Ecuador BDH programme showed no impact on levels of stunting, Paxson and Schady (2008) found that it had a large effect on the haemoglobin levels of the poorest children in rural areas, corresponding to an improvement of approximately 0.3 standard deviations; however, the BDH programme had no effect on haemoglobin levels among relatively less-poor children.

Despite positive impacts on stunting from the RPS in Nicaragua, it has not had a significant effect on the prevalence of anaemia (Maluccio and Flores 2005; Hoddinott 2008) (all cited in Fiszbein and Schady, 2009). PRAF in Honduras has also had no impact on levels on anaemia (Ibid.).

3.5 The role of cash transfers in crisis prevention and management

The fourth component of the resilient food security system is enhancing crisis prevention and management. This is an important component to ensure availability, access and utilization when households are threatened with, or are experiencing, acute shortages of food. This could be a result of predictable seasonal fluctuations in agricultural production or employment, or in the context of sudden shocks such as drought, floods, or food price spikes. Cash transfers can potentially play an important role here to smooth seasonal fluctuations and sudden shocks by maintaining a certain level of household income. Potential problems with cash transfers however can also occur, where food prices spike and the value of the cash transfer does not maintain household purchasing power. Indeed, where food shortages are severe, putting more cash instead of food into the local economy may exacerbate inflation and impact negatively on all food-purchasing households. Here, discussions around index-linking cash transfers, or providing food or vouchers instead of, or in combination with, cash transfers, are particularly important (we discuss these in more detail in section 4 below).

Here, we now look at the available evidence on the role of cash transfers in the context of crises. We first look at long-term "development" cash transfers and their ability to support households in food-security emergencies, and then look at the use of cash transfers in short-term "humanitarian" contexts.

Long-term "development" cash transfers: their role in responding to crises

There is relatively little documentation on the role of long-term "development" cash transfers responding to household shocks and emergencies. However, one study by Maluccio (2005) examined the effect of Nicaragua's CCT programme, the RPS, during the period of a sharp downturn in the price of coffee between 2000 and 2002. Covering treatment and control communities in coffee-growing and non-coffee growing areas, Maluccio analysed changes in nutritional status over the period. He found that height-for-age deteriorated in control communities between 2000 and 2002, but did not do so in RPS communities. However, the positive impact of the RPS on child nutritional status was larger in non-coffee–growing areas than in areas where coffee is grown—a finding that suggests that the RPS was better able to improve child

nutritional status in areas in which household incomes were stable than in areas affected by the economic downturn.

A similar result holds for Mexico, where Oportunidades helped beneficiary households smooth their consumption in the face of income fluctuations (Skoufias 2002). Skoufias also finds that Oportunidades provided that protection without replacing existing informal insurance schemes (Fiszbein and Schady, 2009).

Short-term "humanitarian" relief cash transfers: their role in responding to crises

In the last few years, cash transfers have become an increasingly popular tool in emergency contexts, often replacing forms of food (or other in-kind) assistance or as a complement to more traditional interventions (e.g. cash is being provided alongside interventions such as outpatient therapeutic feeding, to incentivise participation and increase food access at the household level to reduce sharing of therapeutic foods, which are meant only for malnourished children) (Bailey and Hedlund, 2012; Harvey et al., 2010).

There remain significant difficulties and challenges in assessing the impacts of humanitarian programmes in general, and cash transfers in particular, on food security and nutrition[3] but Bailey and Hedlund (2012) summarise the available evidence on cash transfers in emergencies on nutrition which we draw on below. They demonstrate that a wide variety of assessments are used, but that attributing impacts to the cash transfer or other programme features / interventions is a significant challenge. The key findings from Bailey and Hedlund's paper echo the types of results from cash transfer interventions found above in "development" contexts. Notably, cash transfers support both access to and utilisation of food: recipients spend increased income on improving the quantity of food consumed, reducing the need to resort to negative coping strategies, and diversifying diet. An important distinction in the humanitarian literature is the increased attention to intra-household issues – in particular, individual dietary needs. Here, cash transfers are used as an incentive to ensure that individual (particularly children's) nutritional needs are met.

Improving access to food

Evaluations of cash transfer programmes in emergencies demonstrate that they support increased calorie consumption. For instance, two out of three studies which measured the kilocalorie consumption of cash recipients, reported a significant impact (increase from 15% to 90% of beneficiaries consuming adequate kilocalories (SCUK, 2010a; 2010b; 2010c)). Using the WFP Food consumption score (FCS) (which measures the frequency of consumption of 12 food groups and thresholds for 'poor', 'borderline' and 'adequate' food consumption), also shows positive results from cash transfer programmes. Cash transfer beneficiaries have consistently improved their FCS compared to baselines and in comparison to people receiving only food rations or combinations of food and cash. There are exceptions that are largely the result of households privileging the purchase of staple foods, which was the case in interventions in Afghanistan and Niger (Poulsen and Fabre, 2011; Sandstrom, 2010 cited in Bailey and Hedlund, 2012).

Another measurement, using indicators of the use of coping strategies and self-reported hunger also shows positive contributions of cash transfer programmes. For instance, in the Dowa Emergency Cash Transfer (DECT) in Malawi and the Zimbabwe Emergency Cash Transfer (ZECT) programmes, cash beneficiaries reported not only an increase in meals per day (and dietary diversity), but also a decline in negative coping strategies and malnutrition (Devereux et al., 2007; Roman, 2010). And in Malawi, dietary diversity for children increased at the same time that self-reported hunger decreased dramatically for 'cash and food' recipients (from 70% to 22%) compared to 'food only' recipients (from 79% to 61%) (Devereux and Jere, 2008). Cash transfers to mothers of children in outpatient therapeutic programmes in South Sudan reported similar reductions in coping strategies that can have a negative impact on nutrition and in some areas a decline in self-reported hunger (Sloan and Pietzsch, 2010).

Improving utilisation of food

Turning now to the evidence on improving nutrition and utilisation of food, cash transfers demonstrate the positive contribution to household and individual dietary diversity and consumption of better quality food. In some instances, where cash transfers have been implemented in combination with other programmes and services, such as knowledge and behaviour change, positive outcomes on nutrition are being found.
Some programmes have measured nutritional status based on global acute nutrition indicators. Improvements in nutritional status were observed in interventions in Haiti, Kenya, Myanmar, Niger and South Sudan (see Box 1). However, it is also important to note that evaluations of these programmes cited other factors that may have contributed to changes in nutritional status, such as disease outbreaks, changes in

[3] For instance, the relative efficacy of humanitarian interventions is rarely assessed through cohort or case control studies (Hall et al., 2011).

food prices and other humanitarian interventions. Cash interventions are usually done on a smaller scale than other types of assistance which makes it difficult to connect such programmes to changes in global acute malnutrition rates[4].

The majority of cash transfers reviewed by Bailey and Hedlund (2012) showed improved household dietary diversity. When the dietary diversity of cash-recipient households is compared to a baseline or to households receiving food aid, cash recipients consistently consume diets of a better quality and greater diversity, specifically increasing the amount of fresh foods, animal proteins and fats (SCUK, 2010a, 2010b, 2010c; Tchatchua et al., 2008; Devereux, 2007; Devereux and Mhlanga, 2008; Adams, 2007; Concern Universal, 2006; Adams and Kebede, 2005 cited in Bailey and Hedlund, 2012). At the intra-household level, individual dietary diversity scores (IDDS) (ACF, 2010b cited in Ibid.) from four studies found positive impacts on at-risk groups (Otter and Cortes, 2011; SCUK, 2011; Sibson, 2010; Devereux et al., 2007 cited in Ibid). However, there are some exceptions. Concern Worldwide's urban unconditional cash transfer project in Nairobi did not substantially improve dietary diversity (MacAuslan and Schofield, 2011). Focus group discussions with beneficiaries revealed that they wished to increase the variety of items but not the diversity of food groups in order to 'eat like rich people … by buying real bread and spreading Blue Band [margarine] on it' (MacAuslan and Schofield, 2011 cited in Bailey and Hedlund, 2012). Similar results were found from an evaluation of a Concern Worldwide programme in Zimbabwe where for some households dietary diversity did not improve with cash transfers compared to people receiving food, as food aid recipients had more beans in their diet while cash recipients chose not to buy protein-rich foods[5] (Kardan et al., 2010).

There are also examples of programmes that have used cash transfers as an "explicit complement" to supplementary feeding programmes (which provide moderately malnourished children under five with rations containing fortified food) and outpatient therapeutic feeding programmes (which provide ready-to-use therapeutic food to severely malnourished children with no medical complications). Initial evidence suggests positive results, where the cash is seen to provide an incentive to participate as well as reduce sharing of specialised food within the household. In Niger, for instance, households received cash to increase the likelihood that the Supplementary Feeding Programme (SFP) ration would be consumed by children under five years of age in the household, versus being shared amongst all members as was the common practice. Sharing of the SFP ration was reduced (Poulsen and Fabre, 2011). In an SCUK Somalia programme, children whose families were given cash were discharged from outpatient therapeutic programmes 38% quicker than those from non-recipient households, and they put on weight 45% faster than non-beneficiary counterparts (Brewin, 2010). This was attributed to increased food availability at the household level and reduced sharing of the therapeutic foods provided through the outpatient programmes.

There is also some evidence that where cash transfers have been implemented as part of a programme which also aims to change knowledge or behaviour, outcomes are positive. For instance, SCUK observed an increase in vitamin A-rich foods in Niger where cash transfers were accompanied with nutrition education (SCUK 2010a, 2010b, 2010c) and a SCUK intervention on infant and young child feeding (IYCF) practices showed that providing cash and nutrition education to mothers after Cyclone Nargis improved caring practices (Khin Maung Aye et al., 2010). However, the added value of cash and vouchers in obtaining these improvements, compared to other programming components, is not known.

Box 4: **Evidence of cash transfers' impact on Global Acute Malnutrition (GAM) in emergencies**

Evidence from a number of cash transfer interventions in emergencies on Global Acute Malnutrition rates indicates positive trends.

- In Myanmar, cash transfers were provided to families with moderately malnourished children. The transfers were coupled with Plumpynut (for severely malnourished children), training and education on caring practices and general food distributions. GAM rates declined from 6.6% to 2.6% in Middle Island and from 7.5% to 4.7%

[4] Furthermore, GAM may fluctuate according to seasonal changes in food security, the health environment and care practices (Young and Jaspars, 2009), and the pitfalls of before and after snapshots have been discussed. Finally, nutritional statistics rarely met minimum standards for reporting, e.g. 95% confidence intervals or tests for significant change (p-values) (SCN, 2011d). These issues pose obvious implications for drawing conclusions on impact (Bailey and Hedlund, 2012).

[5] However, these findings were exceptional and further analysis of why dietary diversity improves in some instances and not others would be useful (e.g. differences in contexts, poverty levels (Bailey and Hedlund, 2012)

in Mawlamingyun (SCUK, 2010) (see Box 3).

- In Niger, the provision of unconditional cash transfers, coupled with nutrition education and food distributions, were followed by an initial decline from 21.3% to 13.6% GAM. Later, malnutrition rates increased after a malaria epidemic (SCUK, 2009).
- In Warrap State, South Sudan, after targeting the families of malnourished children with business grants, 64% of children from beneficiary households had MUAC measurements of 135mm or above, indicating that they were well nourished, compared to 24% at the time of the baseline (Pietzsch and Sloan, 2010 cited in Hedlund and Bailey, 2012). In Bahr Al Gazal and Upper Nile, a decline of 6% GAM coincided with the distribution of meat and milk vouchers (Farawo, 2009).

Source: Bailey and Hedlund, 2012

4 Factors influencing the role of cash transfer programmes in supporting resilient food systems

There are various factors which influence the outcomes and impacts of cash transfers on food and nutrition security, including programme design (and objectives), programme implementation and context.

4.1 Programme design

The literature points to four main design features which influence the impacts of cash transfers on food security and nutrition: the value of the transfer, the duration and targeting of the transfer and the availability of complementary services (e.g. nutritional supplements) (e.g. see Barrientos and Scott, 2008; Fiszbein and Schady, 2009; HLPE, 2012; Yablonski and O'Donnell, 2009)

First, the value of the transfer is important. The amount of cash transferred must be sufficient to make a substantial contribution to household income in order to have a measurable impact on nutrition (Barrientos and Scott, 2008). Nicaragua's CCT, South Africa's pension and Bolivia's BONOSOL pension stand out in the evidence in terms of having significant impacts on access to food and positive nutritional impacts. These programmes transfer a relatively larger proportion of household income than other cash transfers. The South African Old Age Pension (OAP) for instance, amounts to more than twice the median per capita income for African (black) households (Fiszbein and Schady, 2009)[6]. The converse is also true. In the case of Honduras's conditional cash transfer programme, for instance, the *lack of impact* on nutrition is attributed to a combination of factors, but the small size of the transfers (about 4% of monthly household expenditure) and the fact they were not distributed consistently are reported as likely contributing factors (cited in Yablosonki and O'Donnell, 2009). The level of the transfer should depend on the objectives of the programme (Barrientos and Scott, 2008).

Second, the duration of the transfers is important. The time period during which households are supported needs to be long enough to influence the consumption-investment decision of households (Barrientos and Scott, 2008). This will vary across households of different type and composition (Ibid). Studies on the South African child support grant and Mexico's PROGRESA programme both find greater impacts on stunting in households that had participated in the programme for longer periods of time (cited in Yablonski and O'Donnell, 2009). In South Africa, maximum gains in height-for-age in children were found in those whose families had received the child support grant for two-thirds of the period when children were aged 0–36 months (Ibid). However, we know relatively little of the differential impacts of long-term regular small transfers versus one-off large transfers on nutrition. Recent reports suggest that one-off transfers are more likely to be invested in productive activities (Farrington and Slater, 2009) and the Bolivia pension BONOSOL shows that large transfers are invested for agricultural purposes which have resulted in increased household food security. It is important to note that in the case of BONOSOL the effect is observed only among rural households with land, and is stronger for goods which are typically produced by these households, such as dairy produce, meat and vegetables (Barrientos and Scott, 2008).

[6] US$246 BONOSOL per year

Third, target groups are an important factor. As Yablonski and O'Donnell (2009) state, in terms of the objective of reducing child malnutrition, reaching children at a very young age is key, given the importance of the window between 0–24 months of age (as well as during pregnancy) in order to prevent irreversible effects of malnutrition. As the evidence from Latin America above suggests, larger impacts can be seen among younger children. Conversely, children in Ecuador's Bono de Desarrollo Humano programme evaluation did not begin the programme until at least 18 months, and the weak effects found on nutrition may be because children were not reached early enough (cited in Ibid). However, it is important to also consider intra-household dynamics as well as programme objectives. Indeed, some evidence suggests that cash transfers have more direct food security impacts when delivered to women within the household, who tend to spend more on food and other basic needs for children and the family (Sabates-Wheeler and Kabeer, 2003; see also Thomas 1990; Hoddinott and Haddad 1995; Lundberg, Pollak, and Wales 1997; Doss 2006; Ward-Batts 2008 cited in Fiszbein and Schady, 2009).

It is also important to consider targeting in the context of programme objectives. Evidence from Bolivia's BONOSOL and Mexico's Procampo programme which targeted working farmers also found positive impacts on food security from increased investment in agricultural and productive activities. And positive spill over effects on other household members are found from pensions.

Larger impacts on food security and nutrition are also found amongst the poorest population. Poor households receiving additional income are particularly likely to prioritise spending on improving the quantity and or/quality of food consumed (DFID, 2011).

However, while factors such as the size, duration and recipient of the transfer are major determinants of cash transfer impacts on consumption poverty, given that food and nutrition insecurity is rarely only a factor of income, other factors also play a role in determining food security outcomes - both programme and non-programme factors. Although there is limited evidence on exactly which feature of CCT programmes matters most—the cash, the conditions, the social marketing of the programme, the fact that transfers are made to women—it does not appear that the cash alone can explain the observed changes in outcomes. Indeed, caring practices, women's empowerment, health, knowledge etc. all play a role in determining food security outcomes (see Box 2 which discusses some of the take-up on preventative health care).

For instance, by linking cash transfers to the distribution of nutritional supplements, the Oportunidades programme in Mexico reduced the probability of stunting and actually increased child growth by approximately one-sixth (Behrman and Hoddinott, 2005 (HLPE, 2012). However, linking beneficiaries to nutritional supplements does not always ensure positive results. The lack of a significant programme effect on anaemia in Nicaragua, is one example, even though the programme included provision of iron supplements, and mothers in the treatment group were twice as likely to have received iron supplements as those in the control group (Maluccio and Flores, 2005). The explanation given for this outcome is that children may not have ingested the tablets, or deficiencies in other micronutrients limited the effectiveness of iron supplementation in Nicaragua (Fiszbein and Schady, 2009).

Other programme design features which influence outcomes may include social marketing campaigns and health talks (increased education on health and nutrition, usually directed towards mothers). In Nicaragua, for instance, Macours et al. (2008) argue that the impact of the CCT programme, Atención a Crisis, is larger than would be expected. The programme involved a social marketing campaign that stressed the importance of investments in early childhood and the authors find that households that received transfers altered their spending and behaviour patterns, spending less on food staples and more on animal protein, fruits, and vegetables even after accounting for the income effect of the transfer. The authors stress that they cannot identify whether the larger-than-expected programme impacts are a result of the social marketing of the programmes or the fact that transfers were made to women (Fiszbein and Schady, 2009).

In the case of Mexico there is also evidence suggesting that the pláticas (health meetings) may have contributed to improved health outcomes by encouraging better diets (Hoddinott and Skoufias 2004) and by improving knowledge on a variety of health issues (Duarte Gómez et al. 2004). In that sense, conditioning on "training" may be more effective than conditioning on actual health service use (Fiszbein and Schady, 2009). Importantly, while improving women's knowledge on nutrition and placing responsibility on women to adhere to conditions may be instrumental in improving child nutrition outcomes, it is also important to recognise the importance of sustaining improvements in women's empowerment and status in the household (for effects on nutrition and beyond) but also ensuring a more equal division of labour in the household and promoting co-responsibilities between men and women in the family (especially where conditions exacerbate women's time poverty) (Molyneux, 2007).

Outcomes are also strongly determined by implementation and quality of services, which are discussed in the next section.

Box 5: **Use of health services in CCT programmes**

There is some evidence of increases in the use of **preventive health services**. Some evaluations have found that programme beneficiaries make more use of health services than they would have made in the absence of the intervention, but that is apparent only for some outcomes (such as growth monitoring for children) and generally not for others (such as immunization rates). Most of these evaluations suggest there were positive programme effects on growth and development monitoring visits to health centres by children, for example in Nicaragua's RPS (Maluccio and Flores , 2005), the Familias en Acción program in Colombia (Attanasio et al., 2005) and the PRAF in Honduras (Morris, Flores et al., 2004).

There is also some evidence on changes in the use of preventive health care services by adults. In Honduras, Morris, Flores et al. (2004) use a differences-in-differences strategy to show that the fraction of women who reported five or more antenatal visits increased by 19 percentage points more in the randomly assigned PRAF treatment group than in the control group. On the other hand, PATH in Jamaica appears to have had no effect on the use of preventive health care services by the elderly.

Evidence on the effects of CCT programmes on **immunization coverage** show that the effects are mixed. In Colombia, Attanasio et al. (2005) find positive programme effects for Familias en Acción on immunization rates, although the effects generally are not significant. In Honduras, PRAF appears to have increased coverage of immunization for diphtheria/ pertussis/tetanus, but not for measles. Barham and Maluccio (2008) find large impacts of the RPS on full vaccination coverage in Nicaragua.

4.2 Programme implementation

The capacity to implement and deliver cash transfers is just as important as getting the design features right. While we have drawn heavily on evidence from the Conditional CT literature (because of the availability of this evidence) there is no concrete evidence that the *conditions* are the determining factor in the outcomes (as discussed in programme design above). Indeed, in many contexts, given the administrative capacity and service delivery requirements (such as coordination, and the need for quality basic services) conditional cash transfers may not be the most appropriate cash transfer tool. It is therefore important to consider implementation issues (as well as the design issues) such as the predictability and regularity of transfers as well as the availability of complementary services. Indeed, these are key determinants of cash transfer programmes' effectiveness (e.g. see Barrientos and Scott, 2008). These implementation features are in turn determined by three key factors.

The first is the capacity of central and local government and / or delivering agencies (such as NGOs or private companies) to deliver the cash transfer. As Barrientos and Scott (2008) state, regularity involves incorporating within the programme clear and transparent rules on eligibility, and on the time period for the entitlements. It is important that transfers are disbursed in a timely fashion, to facilitate household budget management. Beneficiary households must have clear and credible information on the size, time and schedule of entitlements (Barrientos and Scott, 2008).

Second, institutional coordination between ministries / sectors, particularly agriculture, food security and health sectors is also important. An integrated systems approach, for instance, using common administrative mechanisms such as unique beneficiary registration, common identification and targeting methods, common monitoring and evaluation systems, and integrated and synchronized transfer modalities, can be seen as best practice here. The two most well known examples of integrated systems approaches are Brazil's Bolsa Familia and Mexico's Progresa-Oportunidades, but similar programmes are being increasingly used in low-income countries as well (HLPE, 2012). For instance, linking cash transfers to the distribution of nutritional supplements has shown impacts on reduction in stunting, increasing child growth. The food security impacts of social protection programmes can be strengthened by linking them to complementary interventions (see the Mexico example above). Brazil's experience of implementing cash transfers within a broader food security package "Zero Hunger" can also offer important lessons in taking an integrated approach (Brazil's prevalence of undernourishment fell from 9% in 2000-02 to 6% in 2006-08 (FAO, 2011)). Municipal agents responsible for registering beneficiaries apply a standardised questionnaire to create the information base for Bolsa Familia. The 'single registry' (Cadastro Único) has generated a broad dataset of the conditions of the poor (income, housing and other factors) throughout the country - and is used by other government programmes to link beneficiaries to other programmes and services. The single registry is seen as a vital

component to the success of social protection programmes, although to be effective needs to be regularly updated. This integrated approach includes civil society and the private sector in the conceptualisation, implementation, monitoring and evaluation of programmes (HLPE, 2012)).

Third, the quality of service delivery and infrastructure of complementary activities or services is a critical element of successful cash transfer programmes (whether conditional or not). A key issue here is the availability of quality health services, and the ability to link programme beneficiaries to other programmes and services, both social (such as knowledge of nutrition, or women's empowerment programmes) and productive (e.g. economic activities). In humanitarian contexts this is also a key area of concern for the potential impact of cash transfers. Bailey and Hedlund (2012) state that cash transfers alone are unlikely to have major impact beyond situations where access to quality healthcare is limited only by economic constraints. In contexts where health services are of poor quality, which is the norm in humanitarian settings, complementary interventions to address the supply and quality of healthcare would probably be needed (Bailey and Hedlund, 2012).

4.3 Context

Finally, the impacts of cash transfers are not only determined by factors of programme design and implementation, but also context. Of particular importance are those factors which influence the purchasing power of cash transfers. Cash is less effective where markets are weak and food prices are high or volatile (HLPE, 2012). Indeed, injections of cash into weak markets can have a negative effect on food prices, pushing them up (as seen in the Ethiopia example above) and cash transfers can rapidly lose value when food prices rise due to inflation, seasonality, or supply failure. Indeed, a key problem occurs not only when staple foods become unaffordable but when the income elasticity of key micronutrients also increases. When staple food price shocks hit poor households, for instance, they will protect staple food consumption but are unable to protect dietary diversity, resulting in adverse effects on nutritional status (for example, research on Indonesia has found that the income elasticity of some key micronutrients (e.g., iron, calcium, vitamin B1) was significantly higher during the 1997–98 crisis than in a normal year). Population groups most affected are those with the highest nutrient requirements, including young children, pregnant and lactating women and the chronically ill. As a result, marked increases in child wasting and child anaemia are often found to be the first consequences of food crises. Under such conditions, a simple cash transfer during a price spike (or income shock) may be enough to protect the consumption of some, but not all, essential micronutrients (FAO et al., 2012).

Two main options are discussed in the literature to respond to this problem. The first is to index-link cash transfers. The global food price crisis of 2007/08 drew attention to the fact that cash transfers are rarely index-linked. However, experience from innovative approaches in Malawi and Zimbabwe in localised emergencies demonstrates that this is possible. In Malawi in 2006, the Dowa Emergency Cash Transfers (DECT) project tracked food prices during a localised drought and adjusted cash transfer payments every month to maintain a constant purchasing power (cited in HLPE, 2012). However, the cost and administrative complexity of doing this raise questions about whether it would be feasible on a large scale.

The other option includes transferring vouchers or food, or combinations of cash – food - vouchers, especially important when highly nutrient-dense diet is required (e.g. to prevent growth failure for children under the age of two) but may not be available in the local market (FAO et al., 2012). Indeed, under certain conditions, specific nutritional supplementation programmes are likely to be needed. Combinations of food and cash were trialled in Swaziland's Emergency Drought Relief (EDR) programme in 2007/08, for example, when social transfers were delivered half in cash and half in food (cited in HLPE, 2012).

The impacts of cash or food appear to be mixed. Using non-experimental methods, Ahmed and Shams (1994) and del Ninno and Dorosh (2003) find that in Bangladesh, the marginal propensity to consume food out of food transfers is higher than out of cash, a finding echoed by Ahmed et al. (2010a). However, the evidence is not so clear cut. In rural Malawi, which also launched a combined food and cash transfer programme, a detailed cost/benefit analysis revealed that households that received cash showed considerable improvements in food consumption and dietary diversity, implying that cash (instead of food) transfers do not necessarily lead to lower food consumption (Audsley et al., 2010). A further study, on the impact of a cash and food transfer pilot in post-tsunami Sri Lanka, found that cash-receiving households were more likely than food-receiving households to spend some of their resources on improving the diversity of their diets by buying more expensive cereals and greater amounts of meat, dairy products and processed foods (Mohiddin et al 2007). The increased diversity in consumption was achieved at the expense of reduced consumption of the two basic staples – rice and wheat. These effects mainly occur among the poorest

beneficiary households. However, in Niger, comparing food and cash transfers shows that the majority of households prefer food, and that food-receiving households tend to have more diverse diets and less damaging coping strategies. (FAO et al., 2012).

Vouchers[7] can also be used to ensure an adequate diet, and have been justified over the use of cash in some humanitarian contexts when agencies want to "limit the range of food products that beneficiaries can buy, sometimes on the assumption that beneficiaries might have other priorities if given cash" (FAO, 2011; Barrett et al., 2011 cited in Bailey and Hedlund, 2012: page number). Vouchers have been used in particular to encourage the purchase of animal-source foods (meat, dairy and eggs) and other fresh foods (fruit and vegetables) when these are at risk of being eliminated from the diet (Bazin, 2010; Dunn, 2010; Creti, 2010; Hedlund and Glintchy, 2009 cited in Bailey and Hedlund, 2012). Fresh food vouchers (FFV) have been used to improve micronutrient consumption among refugees in the Dadaab camps in Kenya, the occupied Palestinian Territories and Bolivia (Cortes and Otter, 2011; SCUK, 2011; Dunn, 2010 cited in Bailey and Hedlund, 2012).

5 Conclusion and policy implications

This paper has found that cash transfers mainly contribute to resilient food systems by improving access and utilisation. This occurs in both development and emergency contexts, however, in emergency contexts, we know much more about the impacts of short-term relief responses than about those of development-focused interventions.

Cash transfer programme evaluations and research have mostly focused on outcomes relating to food access and utilisation rather than own production or increased availability. This is likely to be a result of the fact that most cash transfer (unconditional and conditional) objectives are to alleviate short-term consumption smoothing or long-term investment in human capital, not increase shorter-term productivity.

The literature points to a number of issues which need to be considered for cash transfers to have a positive impact on food and nutrition security.

1. The level of transfer, duration, and target group affect the potential impact on food security

Evidence from existing cash transfer programmes demonstrate that the size of the transfer is important. The amount of cash transferred must be sufficient to make a substantial contribution to household income in order to have a measurable impact on nutrition (Barrientos and Scott, 2008) although we are still unclear of specific income/expenditure thresholds. Programmes which have had a significant impact on food access and utilisation, such as Nicaragua's CCT, South Africa's pension and Bolivia's BONOSOL pension, transfer a relatively larger proportion of household income than other cash transfer programmes. In addition, the length of beneficiary programme participation is also important - where better impacts on food security are found when beneficiaries have been in the programme for longer and the age of recipient is also a key factor in food security outcomes, where targeting young children results in better child nutrition outcomes.

These are all determinants of the cash transfer programme objective, which, is also critical in terms of programme outcomes. Although this is an obvious statement it is often overlooked, especially where cash transfer programmes are expected to have multiple outcomes which may be over and above the stated objective. It is important to note therefore, that at appropriate levels of supporting monthly household expenditure, regular cash transfers are likely to support improved quantity and quality of food. Larger cash injections (at the correct seasonal time) targeted to households with land / access to productive resources are more likely to have an impact on agricultural productivity.

[7] We do not discuss the effects of vouchers in depth in this paper because of the different objectives and mechanisms of vouchers compared to cash, but some brief findings are presented here.

2. There is potential to enhance impacts on food security through additional nutrition-focused complementary links and services

A number of conditional cash transfers link programme beneficiaries to healthcare services and increasingly include complementary interventions such as nutritional supplements and nutrition awareness sessions. Initial evidence (see #4 below) suggests that these nutritional-focused components have positive effects on nutritional outcomes, especially when they delivered in an integrated programme.

3. Cash transfers may not be the most appropriate instrument in time of food price spikes and weak markets

The purchasing power of cash transfers may rapidly decline in contexts of food price spikes, and in some cases, may have inflationary impacts where markets are weak. These issues need to be assessed when considering the use of cash transfers for food security goals. In this context, options such as index-linking cash transfers (although these are administratively complex and costly) and / or alternatives or combinations of cash / food / vouchers should be considered.

4. More evidence is needed on the pathways leading to improved food security and nutrition outcomes

While evidence suggests that nutritional supplements and awareness raising enhance nutritional outcomes, we know relatively little about the specific impacts of an integrated approach on food security whereby cash transfers are delivered in combination with other interventions. Improvements in monitoring and evaluation of programmes from a food security perspective could include assessing the relative importance and value of nutritional supplements, health care, social awareness campaigns, nutritional education and women's empowerment.

5. Strengthening implementation capacity and institutional coordination is vital

Programme implementation is as critical as programme design. To maximise the potential effectiveness of cash transfers on food security, the delivery of predictable and regular cash transfers requires implementation capacity, coordination and quality complementary services. Institutional coordination between ministries and sectors, particularly agriculture, food security and health is particularly important. Establishing integrated systems and mechanisms such as unique beneficiary registration, common identification and targeting methods, common monitoring and evaluation systems, and integrated and synchronized transfer modalities, can be seen as best practice here.

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