

Food and Agriculture Organization of the United Nations

Social Protection

From Protection to Production

Impact of Cash Transfer programs on Food Security and Nutrition:

A Cross- Country Analysis

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Transfer Project workshop

Dakar, June 8, 2017

Background

- Food security and nutrition remains one of Africa's most fundamental challenges.
- With the highest concentration of rural poor, sub-Saharan African countries facing the most severe deprivation.
- Over the past decade, cash transfer (CT) programs have been introduced in many African nations

Objective of the study

- To explore the extent to which government-run CT programs in four sub-Saharan countries affect food security and nutritional outcomes

- To understand impacts variability by the extent of treatment

CT Programs

- Ghana Livelihood Empowerment Against Poverty (LEAP)
- Kenya Cash Transfer for Orphans and Vulnerable Children (CT-OVC)
- Lesotho Child Grants Programme (CGP)
- Zambia Child Grant (CG) model of the Social Cash Transfer

Main features:

- Unconditional
- Government run
- Similar but not identical target rural populations (labor constrained households)
- Around 20 PPP$ per month, lower for LEAP (before doubling of payments)

Main characteristics of the evaluations

- Ghana LEAP: Longitudinal PSM. Baseline 2010, follow-up 2012. ISSER
- Kenya CT-OVC: RCT. Baseline 2007, follow-up 2009 and 2011 (we look only at 2009 data). OPM
- Lesotho CGP: RCT. Baseline 2011, follow-up 2013. OPM
- Zambia CG: RCT. Baseline 2010, follow-up 2012. AIR

Theory of change

- Expected immediate impact is increase in food consumption:

1) Direct, through greater purchasing power
2) Indirect, through greater ag production and crop diversification

- Ultimate longer-term impact is improvement in beneficiaries' nutrition and health

Outcomes of interest

- Per capita food expenditure & main food groups
- Per capita daily caloric intake
- Dietary Diversity (HDDS, Simpson, Shannon, # food items consumed)
- Share of food expenditure & main food groups, share of caloric intake from main food groups
- Self-reported food security indicators

Availability of outcome variables across countries

Outcome variable	Ghana	Kenya	Lesotho	Zambia
Food consumption	Yes	Yes	Yes	Yes
Caloric intake	No	No	Yes	Yes
Dietary diversity	Yes	Yes	Yes	Yes
Self-reported food security	No	No	Yes	Yes

Methodology

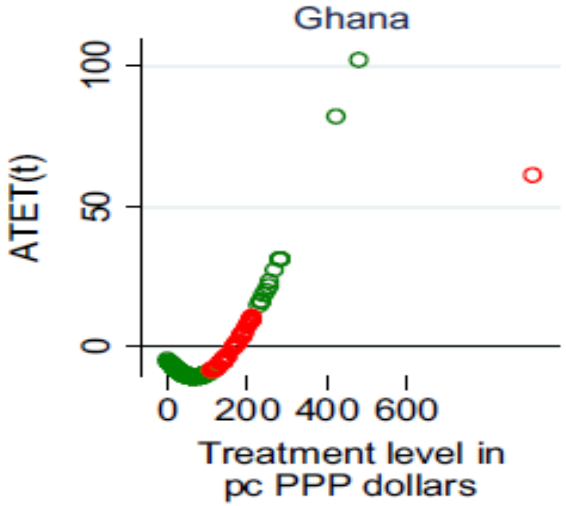
- Binary treatment analysis. Diff-in-diff with baseline covariates adjustment (common set of regressors)
- Continuous treatment analysis. Dose-response function
- Inverse probability weighting to corroborate conditional mean independence assumption (observed characteristics are mean independent from treatment status)

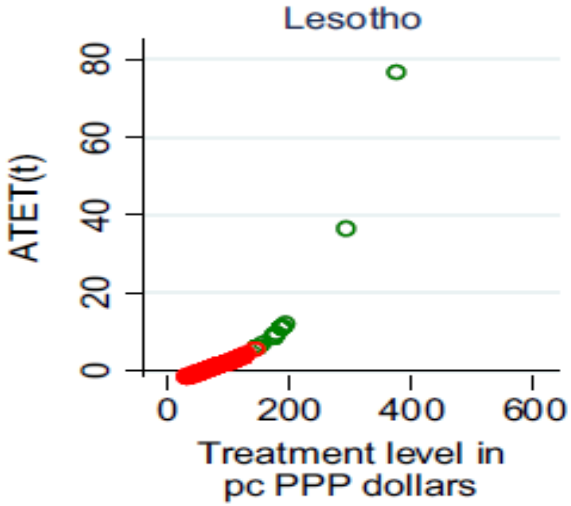
Main results
Food consumption

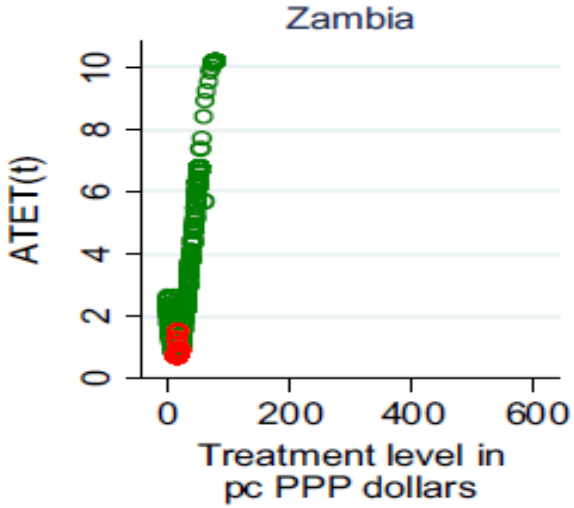
1) Only in Zambia a significant increase in overall per capita food consumption (2.5 PPP$) and increases in consumption for several food groups. In other countries, results are not statistically significant
2) For all countries no changes in % of total expenditure on food
3) In Zambia and Kenya, a significant reduction in the share of consumption of roots and tubers (-4.2% and -1.8%) and of fruits and veggies (-4.6% and -2.2%). In Zambia, increase in the share of pulses and legumes (1.7%), while the increase in Kenya is on animal products (4.2%)
4) Reduction of consumption of animal products and roots and tubers in Ghana

Main results

Dose response function for food consumption







Statistically significant effects in green (at 5%)

Main results
Dietary diversity

1) Large statistically significant impacts in Zambia and Kenya on all indicators. Some positive impacts in Lesotho. Lack of impacts in Ghana
2) Increase in the # food items consumed: 1.5 in Kenya, 2 in Zambia
3) Increase in HDDS: 0.27 in Lesotho, 0.6 in Kenya, 1 in Zambia (scale is 1-12)
4) Increase in Shannon index: 0.06 in Lesotho, 0.09 in Kenya, 0.16 in Zambia (scale is 0-0.916)

Main results
Caloric intake

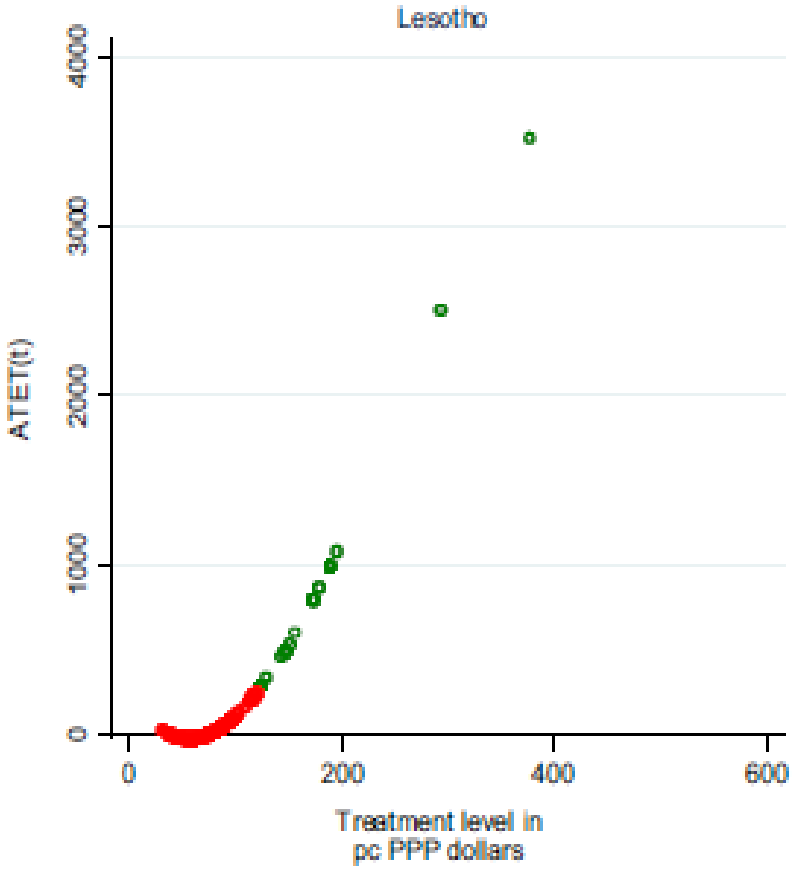
In Zambia:

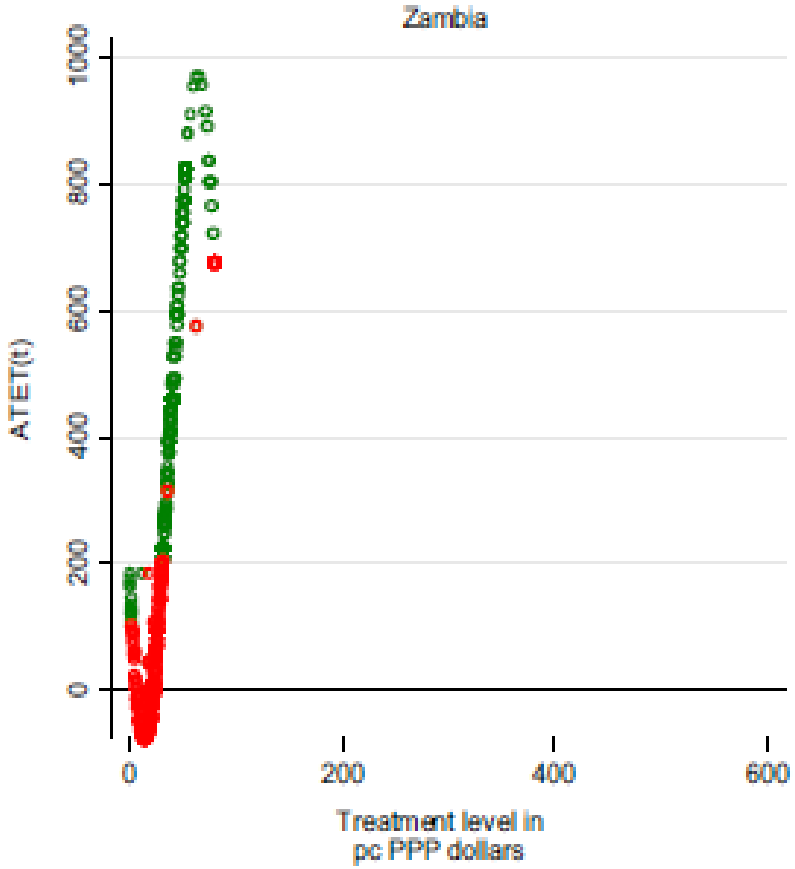
1) Positive and statistically significant impact on per capita daily caloric intake (215kcal).
2) Increase in the share of calories from pulses and legumes and reduction from roots and tubers (mirroring consumption results)
3) Reduction in undernourishment

In Lesotho:

1) Positive but not statistically significant on per capita caloric intake (177kcal)
2) Interestingly, very positive and significant for the poorest (301 kcal)

Main results
Dose response function for caloric intake



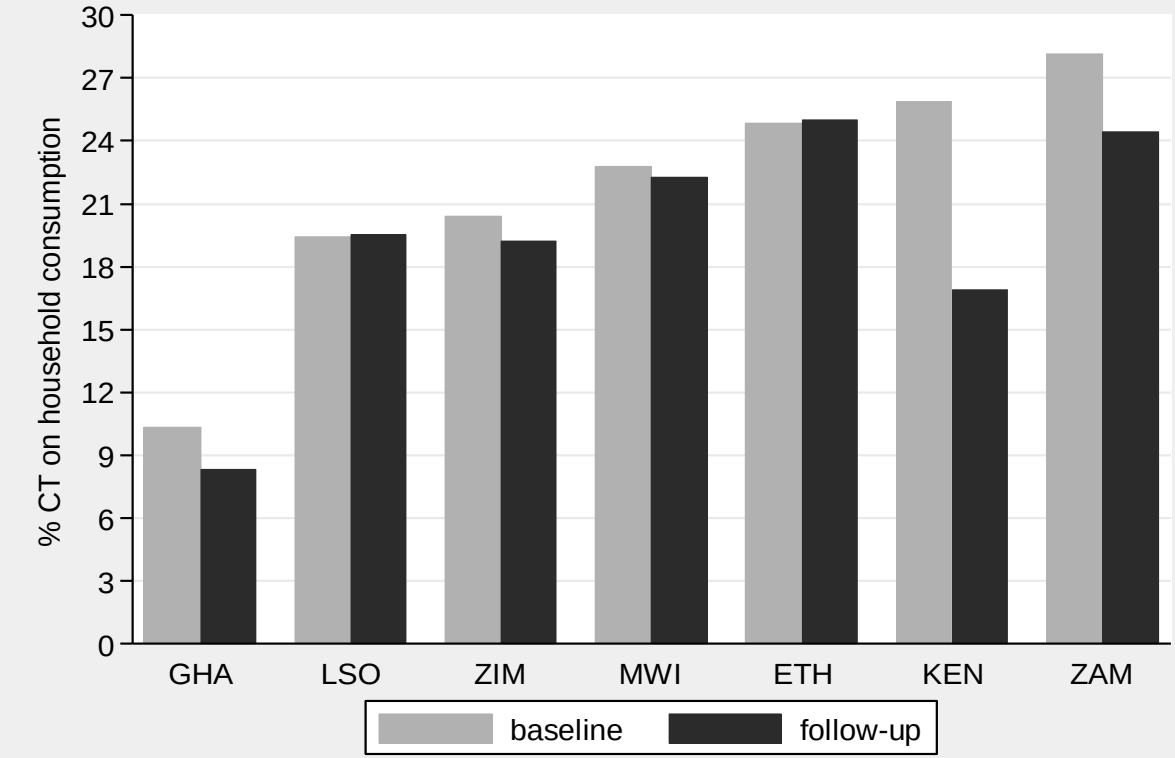


Statistically significant effects in green (at 5%)

Main results
Self-reported food (in)security

- Reduction of adults food insecurity in Zambia
- the share of households reporting being hungry and/or going to bed at night hungry reduced by 16 percentage points…
- … while the proportion of households with adults eating fewer and smaller meals decreased by 5.5 and 4.2 percentage points
- Similar results in Lesotho, stronger for children (8.5 percentage points reduction)

Why the difference in results?
CTs in proportion of household consumption



Note: 2011 follow-up for Kenya

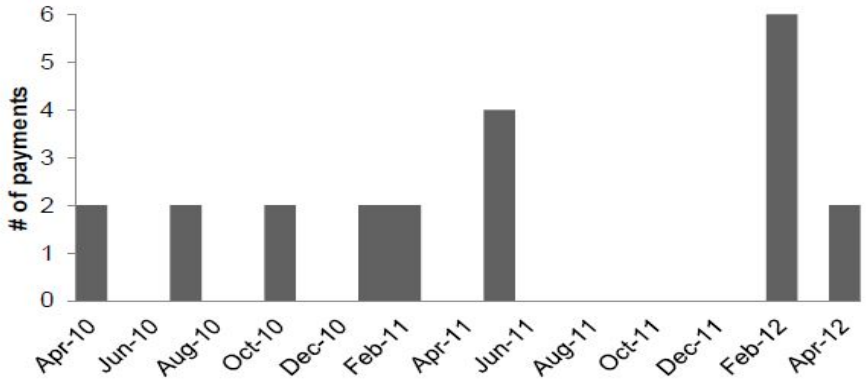
Why the difference in results?

Predictability of payment

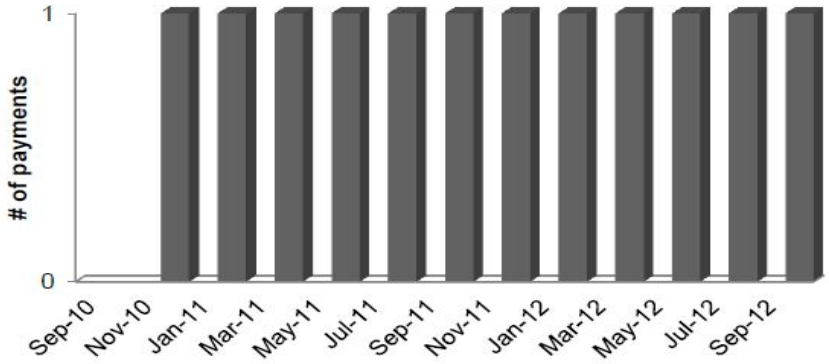
Lumpy and irregular

Regular and predictable

Ghana LEAP



Zambia CGP



Regular and predictable transfers facilitate planning, consumption smoothing and investment

Limitations

- Survey instruments designed at different points in time with no coordination (cross-country comparison not an evaluation objective)
- Consumption versus acquisition, different recall periods
- Conversion to caloric intake
- Self-reported transfer payments (only in Lesotho access to administrative data)

Food and Agriculture Organization of the United Nations

THE TRANSFER PROJECT

The article

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Impact of cash transfer programs on food security and nutrition in sub-Saharan Africa: A cross-country analysis

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ABSTRACT

This paper explores the extent to which government-run cash transfer programs in four sub-Saharan countries affect food security and nutritional outcomes. These programs include Ghana's Livelihood Empowerment Against Poverty, Kenya's Cash Transfer for Orphans and Vulnerable Children, Lesotho's Child Grants Program and Zambia's Child Grant model of the Social Cash Transfer program. Our cross-country analysis highlights the importance of robust program design and implementation to achieve the intended results. We find that a relatively generous and regular and predictable transfer increases the quantity and quality of food and reduces the prevalence of food insecurity. On the other hand, a smaller, lumpy and irregular transfer does not lead to impacts on food expenditures. We complement binary treatment analysis with continuous treatment analysis to understand not only the impact of being in the program but also the variability in impacts by the extent of treatment.

1. Introduction

The goal of this paper is to evaluate four unconditional cash transfers (CTs) in sub-Saharan Africa (SSA) to understand the extent to which such programs affect food security and nutrition outcomes. For the poor households targeted by these programs, the most immediate impact of a CT is expected to be an increase in food consumption. This change may occur in two distinct ways: (1) directly through an increase in purchasing power, which enables households to increase the quantity of food purchased. The degree to which this is verified depends on Engel's law according to which as income rises, the proportion of income spent on food falls; (2) indirectly by increasing agricultural production and crop diversification. In fact, 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 (Gertler et al., 2012). Further, cash transfers can affect local markets by generating increased demand that can, in turn, trigger a supply response by local producers (Thome et al., 2016).

Cash transfers can directly improve the quality and diversity of diet through increased household income. 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). Cash transfers may also improve availability, access and utilization of food for households at risk of experiencing shortages because of seasonal fluctuations or of sudden shocks such as drought and floods. Further, cash transfers can potentially play an important role to smooth consumption by stabilizing household income fluctuations (Maluccio, 2005).

Much evidence on the impact of CTs on food security and nutrition originates from Latin America, where CCTs programs have operated for a number of years (Fiszbein et al., 2009) and have contributed to an increase in households' food expenditure, both overall and as a share of income, and particularly for specific food groups, such as animal products. Hidrobo et al. (2015) is the most recent and comprehensive review of studies that assess the impact

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Thank you