

Cash transfers in Ghana:

Evidence Overview of LEAP and LEAP 1000 impacts

Tia Palermo and Prince Changole

Policy Research Solutions (PRESTO)

1. Introduction

Social protection is prominently featured in the 2030 development agenda, as it can contribute to reducing poverty and inequality and can also improve human capital development, which allows the next generation to be healthy, educated, and reach their full potential to contribute productively as adults to society. The Livelihood Empowerment Against Poverty (LEAP) programme is a cash transfer programme and the flagship social protection programme under Ghana's National Social Protection Strategy. It is implemented by the LEAP Management Secretariat in the Ministry of Gender, Children and Social Protection. Started in 2008, it was expanded in 2009-2010 and again in 2015-2016. As of May 2024, LEAP reached approximately 360,000 households across Ghana. The programme is targeted through a combination of a proxy means test (PMT) and categorical eligibility (households with individuals who are aged 65 and above without any form of support, have severe disability without productive capacity, are orphans and vulnerable children, and pregnant women and mothers with infants). Programme benefits include a cash transfer delivered every other month and a premium fee waiver for enrolment into the National Health Insurance Scheme (NHIS).

Two impact evaluations examining effects of LEAP have been conducted. The first was conducted between 2010 and 2016 in eight regions across Gha-

na. A key finding from this evaluation in 2012 was that LEAP payments were of low value (eroded by inflation) and not made in a predictable, regular manner. This limited impacts of LEAP on household well-being. Informed by those findings, LEAP operations were improved, and payments were made more regularly. The methods used in this evaluation to detect impacts of the LEAP programme on indicators related to household well-being (poverty, food security, health, and education) in 2012 and again in 2016 compared household surveys collected from 914 LEAP households to similar households (referred to as "comparison households") from an existing national household survey conducted in 2010. Between 2015 and 2022, a second evaluation was conducted to evaluate impacts of LEAP 1000, which at the time was a pilot to extend LEAP benefits to households with infants and pregnant women. Previously, LEAP did not reach many households with young children due to targeting criteria, and thus efforts were made to expand eligibility criteria to households with young children to reduce poverty and malnutrition in these households. This category has since been mainstreamed nationally. The evaluation of LEAP 1000 compared similar households just below (qualifying for LEAP) to those just above (not qualifying for LEAP) the PMT cutoff for the LEAP 1000 expansion in five districts in the Northern and Upper East Regions. Follow-up data were collected in 2017 and again in 2022. The comparison group was found to be

appropriate, and impact estimates are credible (Ghana LEAP 1000 Evaluation Team, 2016). Data from both impact evaluations have also been leveraged for additional, in-depth studies on several topics, and these have been published in peer-reviewed journals.

This brief summarizes evidence from the evaluations of LEAP and LEAP 1000, based on official impact evaluations (Ghana LEAP 1000 Evaluation

Team, 2016, 2018, 2024; Ghana LEAP Evaluation Team, 2017), as well as journal articles (several of which use data from the impact evaluations). We organize this summary of impacts by domain, including local economy effects, poverty, food security, productive/livelihood impacts, health and nutrition, education, and gender equality.

Box 1. Key takeaways

- Investments in LEAP have a return on investment of 1.5.
- LEAP reduces monetary poverty and multidimensional poverty.
- LEAP increases households' food security.
- LEAP increases adult participants' engagement in household farming and paid labour.
- LEAP increases households' ability to save money and invest in livestock.
- LEAP increases adults' and children's use of health services when ill.
- LEAP increases health insurance enrolment, and effects are even larger in communities with high quality health services.
- Cash transfers reduce mortality risk in Africa, including among young children.
- LEAP 1000 reduces the risk of low birthweight, and longer exposure to LEAP 1000 in utero is associated with increased birthweight.
- LEAP 1000 was not found to improve stunting, wasting, or underweight among children under 5 years, but studies outside of Ghana have found that cash transfers can reduce stunting and wasting and increase height-for-age.
- LEAP improves water, sanitation, and hygiene conditions in households.
- LEAP increased women's decision-making, social support, community participation, and promotes peaceful co-existence in the home (including reductions in intimate partner violence).

List of tables

Table 1.	Poverty	4
Table 2.	Consumption/Expenditures	4
Table 3.	Savings	4
Table 4.	Food security	5
Table 5.	Time Spent in Productive Activities	7
Table 6.	Child Morbidity & health services utilisation	8
Table 7.	Adult Morbidity & health services utilisation	9
Table 8.	Health insurance uptake	9
Table 9.	Stunting, wasting and underweight	10
Table 10.	Water, Sanitation, and Hygiene (WASH)	11
Table 11.	Enrolment	12

2. Effects on the local economy

LEAP has significant income multiplier effects in the local economy.

Every Cedi transferred to a poor household as part of the LEAP programme added 2.5 Cedis to total income in the local economy (implying a spillover of 1.5 Cedis) in nominal terms¹ (Thome et al., 2016). This is because cash transfers raise purchasing power in beneficiary households, and these households in turn spend a portion of their cash in the local community. This means that investments in LEAP have a return on investment of 1.5.

3. Poverty, consumption, and expenditures

LEAP 1000 reduced poverty headcount and the poverty gap index, and LEAP reduced multidimensional poverty among children.

LEAP has been successful at reducing poverty rates. Two years after rollout in 2015, LEAP 1000 reduced **poverty headcount**² by 2.1 percentage points, the **poverty gap index**³ by 2.6 percentage points, and the **poverty gap index squared** by 2.5 percentage points (Ghana LEAP 1000 Evaluation Team, 2018). While there were no impacts on the extreme poverty headcount, LEAP 1000 reduced the **extreme poverty gap index** by 2.7 percentage points and the **extreme poverty gap index squared** by 2.3 percentage points. Subsequently, in 2022, impacts on poverty were even larger; LEAP 1000 reduced poverty by 3.1 percentage points and extreme poverty by 5.7 percentage points (Ghana LEAP 1000 Evaluation Team, 2024). Multi-dimensional poverty is a complementary measure to monetary poverty. It measures poverty along various dimensions, including education, health, and access to basic services. LEAP reduced multidimensional poverty⁴ among pre-school and school-aged

children in beneficiary households by 10.5 and 1.3 per cent, respectively (Osei & Turkson, 2022).

After two years, LEAP 1000 increased per capita⁵ **consumption** (expenditures) per month by 20.70 Cedis⁶ and per capita food consumption by 14.74 Cedis (Ghana LEAP 1000 Evaluation Team, 2018, 2024; Handa et al., 2022). Then, after seven years, it was estimated that LEAP 1000 increased per capita consumption per month by 26.51 Cedis and food consumption by 21.44 Cedis. When asked what LEAP beneficiaries spend their cash transfers on, the most common responses were food and nutrition, healthcare, education, and clothing (Ghana LEAP 1000 Evaluation Team, 2018).

Another study outside of the official impact evaluations asked LEAP participants about their consumption before and after receiving LEAP (surveys were administered at only one time point and respondents answered retrospectively) in two districts in the Upper West region of Ghana (Fuseini et al., 2019). The study found that LEAP increased beneficiary income levels, with the **median annual income** rising from GHC 800 to GHC 1062.

Savings and debt

LEAP 1000 increases households' ability to save money.

Official evaluations of LEAP and LEAP 1000 found that the programmes increased the probability that households have **savings** by 15.3 percentage points and 12 percentage points, respectively (Ghana LEAP 1000 Evaluation Team, 2018; Ghana LEAP Evaluation Team, 2017). Another study found that LEAP increased participants' **ability to save money** by 24 percentage points (Fuseini et al., 2019). A qualitative study reported that, with LEAP cash, women could join savings groups and receive loans, as lenders believed they would be capable of repayment, enabling them to engage in

¹ In real terms, each Cedi invested in LEAP added 1.5 Cedis in real income (implying a spillover of 0.5 Cedis). Real terms refers to currency adjusted for inflation. Real income multipliers account for price changes by dividing nominal income by a local consumer price index before and after the transfer is rolled out.

² The poverty headcount measures the proportion of the population that is poor

³ The poverty gap measures the extent of poverty. In other words, it measures how far poor households find themselves from the poverty line by measuring the distance (in monetary value) between household expenditures and the poverty line

⁴ Measured the Alkire and Foster method, which measures the incidence and intensity of deprivations in health, education, and standard of living at the household level Alkire, S., Kanagaratnam, U., & Suppa, N. (2020). *The global Multidimensional Poverty Index (MPI): 2020 revision' (OPHI MPI Methodological Note 49, Issue.)*

⁵ Measured as per adult equivalent.

⁶ 24-month impacts are as reported in the 7-year follow up report (amounts are expressed in constant Greater Accra August 2022 prices for ease of comparison across years). In the 24-month follow-up report (published in 2018), impacts are reported as Ghc 8.47 and Ghc 6.6, respectively. That is because Ghc 8.466 in 2018 is equivalent to Ghc 20.695 in 2022.

entrepreneurial activities (Barrington et al., 2022). Similarly, another study found that the LEAP programme improved access to loans from family and friends. This increased willingness to loan to LEAP households is the result of increased confidence in the ability of LEAP beneficiaries to repay loans, suggesting that LEAP enhanced the credit capacity of the beneficiaries (Amuzu et al., 2010). These findings were echoed in another study which found that LEAP beneficiaries increased their cash savings and access to credit (Daidone et al., 2015).

By allowing households to meet their basic needs and still have leftover cash for savings, LEAP can promote investment in assets for agriculture or nonfarm enterprise, which in turn can make households more productive and more resilient to future shocks. For example, when shocks such as drought, inflation, death in the family, or job loss occur, families can cope with these shocks using positive coping strategies like spending down their savings, and not engage in negative coping strategies (taking on debt, sending children to work for pay, etc.). In addition, savings can help households invest in children's education.

TABLE 1. Poverty

Programme	Evaluation point	Year impacts were measured	Measurement unit	Reference period	Impact in percentage points
LEAP 1000	2 years	2017	Poverty headcount	Past month	NS
		2017	Poverty gap index		
		2017	Poverty gap index squared		
	7 years	2022	Poverty headcount	Unspecified	15.3 pp**
		2022	Extreme Poverty headcount		

NS = Impacts not significant; * 10% significance ** 5% significance; *** 1% significance

TABLE 2. Consumption/Expenditures

Programme	Evaluation point	Year impacts were measured	Measurement unit	Reference period	Impact in Cedis
LEAP 1000	2 years	2017	Adult equivalent household expenditure	Monthly	20.70 Cedis ^{1***}
			Adult equivalent food expenditures	Monthly	14.74 Cedis ^{1***}
LEAP 1000	7 years	2022	Adult equivalent total expenditures	Monthly	26.51 Cedis ^{1**}
			Adult equivalent food expenditures	Monthly	21.44 Cedis ^{1***}
LEAP	6 years	2016	Total household expenditures	Monthly	NS
			Total household food expenditures	Monthly	NS
	2 years	2012	Adult equivalent household expenditure	Monthly	NS
			Adult equivalent food expenditures	Monthly	NS

NS = Impacts not significant; * 10% significance ** 5% significance; *** 1% significance;

1 - 24-month impacts as reported in the 7-year follow up report (amounts are expressed in constant Greater Accra August 2022 prices for ease of comparison across years)

TABLE 3. Savings

Programme	Evaluation point	Year impacts were measured	Measurement unit	Reference period	Impact in percentage points
LEAP 1000	2 years	2017	Saving money (women)	Past month	12.0 pp ^{***}
LEAP	2 years	2012	Any savings (household)	Past month	NS
	6 years	2016	Any savings (household)	Unspecified	15.3 pp ^{**}

NS = Impacts not significant; * 10% significance ** 5% significance; *** 1% significance

4. Food Security

LEAP increases food security as measured by number of meals consumed per day.

LEAP reduced food insecurity among households and children and reduced the probability that a child went the entire day without eating by 9.6 percentage points (Ghana LEAP Evaluation Team, 2014). LEAP 1000 increased the share of households eating three meals per day by 6.4 percentage points (an increase from 59.2 per cent to 66.6 per cent) and increased the **average number of meals consumed** per day by 0.09 meals after two years and 0.084 meals after 7 years (Ghana LEAP 1000 Evaluation Team, 2018, 2024). However, there were no impacts of LEAP 1000 on worry related to food insecurity or on a scale comprised of multiple items intended to summarize overall food insecurity (the Household Food Insecurity Access Scale). LEAP evaluations have not specifically examined **caloric intake**, but a global meta-analysis found that cash transfers increased caloric intake by 8 per cent globally (6 per cent in sub-Saharan Africa) (Hidrobo et al., 2018).

5. Productive Activities and Livelihoods

Own Farm Activities and Labour

LEAP enables household members to switch from less preferred types of labour (casual day labour) to more preferred types, such as own farm production.

After two years, LEAP 1000 increased the amount of time that adult men and women spent in own household farm labour and reduced the engagement among the elderly in livestock tending (Ghana LEAP 1000 Evaluation Team, 2018). LEAP 1000 reduced female children’s engagement in casual labour but had no effects among adults (or male children). LEAP 1000 increased working age women’s time in wage labour by 3.5 hours over a 7-day period and reduced working age men’s participation in wage labour by the same amount (results not shown)⁷. However, elderly men increased the likelihood of participating in wage labour as a result of LEAP 1000. LEAP 1000 also increased male and female working-age adults’ participation in own farm work during the previous rainy season.

TABLE 4. Food security

Programme	Evaluation Time Point	Year impacts were measured	Reference Group	Indicator	Reference Period	Effect Size
LEAP	2 years	2012	Household	Food insecurity scale	Not reported	-0.245**
			Children under 17 years	Child food insecurity	Not reported	-0.702**
			Children under 17 years	Child missed entire day of eating	Not reported	-0.096**
	6 years	2016	N/A	Not Measured	Not measured	Not measured
LEAP 1000	2 years	2017	Household	Number of meals per day	Unspecified	0.091***
			Household	No member went without food	Last 4 weeks	NS
			Household	Worry about food	Last 4 weeks	NS
			Household	Food insecurity scale	Last 4 weeks	NS
			Children Under 5	Always ate nutrition food	Last 4 weeks	NS
			Children Under 5	Always given enough food	Last 4 weeks	NS
	7 years	2022	Household	Number of meals per day	Unspecified	0.084**

NS = Impacts not significant; NFE=non-farm enterprise; * 10% significance ** 5% significance; *** 1% significance

⁷ As reported in Ghana LEAP 1000 Evaluation Team. (2018). *Ghana LEAP 1000 Programme: Endline Evaluation Report*.

These findings suggest that LEAP 1000 participants were able to switch from less preferred types of labour (casual day labour) to more preferred types (own farm production or non-farm enterprise). Similarly, LEAP increased the number of days provided by family labour on the farm by 30 days (Ghana LEAP Evaluation Team, 2017). These findings are supported by qualitative interviews, which found that LEAP participants did not reduce work effort; rather, they enabled beneficiary households to have increased autonomy over their productive activities, allowing them to reduce engagement in casual day labour and engage in more preferred types of labour (including for their own household) (Fisher et al., 2017). Using data from the LEAP evaluation, another study found that LEAP increased the probability that participants moved from being unemployed to wage employment by 2.9 percentage points (Osei & Lambon-Quayefio, 2021), and this finding (that LEAP causes participants to move into wage labour) is supported in another study (Prifti et al., 2018).

Non-Farm Enterprise

LEAP has mixed impacts on non-farm enterprise operation.

At the household-level, there were no impacts after two years and seven years on the overall probability that households operated a non-farm enterprise (Ghana LEAP 1000 Evaluation Team, 2018, 2024). However, information at the individual-level tells a more nuanced story. LEAP 1000 increased elderly women's participation in nonfarm enterprise, but simultaneously decreased elderly men's participation in the same after two years (Ghana LEAP 1000 Evaluation Team, 2018). In addition, LEAP 1000 slightly increased the number of enterprises by 0.041, indicating that households already owning non-farm enterprises intensified their operations (LEAP 1000 Evaluation Team, 2018). Similarly, qualitative data after seven years did suggest that participants invested the LEAP transfers in purchasing livestock, agricultural inputs or by hiring labour (Ghana LEAP 1000 Evaluation Team, 2024). In contrast, an evaluation of LEAP found that the programme had a negative impact on **non-farm enterprise ownership** (LEAP Evaluation Team, 2017).

However, the evaluators explained that this could be due to study design limitations and the fact that there was a larger increase in the probability of owning a non-farm enterprise among comparison households over the evaluation period.

Productive Asset Purchase

LEAP enables households to invest in livestock and productive assets to increase their crop yield.

LEAP increased agricultural asset ownership by 5.3 percentage points and use of seeds and fertilizer by 10.9 percentage points and 13.9 percentage points, respectively (Ghana LEAP Evaluation Team, 2017). Subsequently, LEAP increased real crop yield value by 266 Cedis (Ghana LEAP Evaluation Team, 2017). Similarly, LEAP 1000 increased ownership of livestock by 5.6 percentage points (largely driven by goat ownership) (LEAP 1000 Evaluation Team, 2018). Additionally, LEAP 1000 increased by 6 percentage points the probability that households raised poultry after two years (Ghana LEAP 1000 Evaluation Team, 2018, 2024). Qualitative interviews indicated that participants viewed investing in animals as a form of insurance.

A separate, smaller study examined impacts of LEAP combined with complementary programming around financing life skills and micro-enterprise training and found that the combined interventions enabled households to purchase livestock, specifically cattle and sheep (Amofa et al., 2023).

Resilience and coping strategies

Regular, predictable cash transfers that keep pace with inflation and are delivered over an adequate period of time can play a crucial role in enhancing household resilience to future shocks. First cash transfers can facilitate the diversification of livelihoods and income streams. Second, by providing a regular and predictable source of income, beneficiary households can better anticipate and plan for contingencies (including through increased savings), thereby shielding them from resorting to harmful coping mechanisms (like selling off assets or sending children to work or girls to be married) when confronted with income shocks (Bastagli et al., 2016; de Hoop & Rosati, 2014).

TABLE 5. Time Spent in Productive Activities

Programme	Evaluation Time Point	Year impacts were measured	Age range	Indicator	Gender	Reference Period	Effect Size
LEAP 1000	2 years	2017	7 to 14 years	Engaged in household farming activity	Female	Previous rainy season	NS
					Male		NS
				Spent any time on household NFE	Female	Last 7 days	NS
					Male		NS
				Spent any time on household livestock activities	Female	Last 7 days	NS
					Male		NS
				Spent any time on casual labour	Female	Last 7 days	-2.6 pp*
					Male		NS
				Spent any time on wage labour	Female	Last 7 days	NS
					Male		NS
			Engaged in household farming activity	Female	Previous rainy season	4.4 pp**	
				Male		3.0 pp*	
			Spent any time on household NFE	Female	Last 7 days	NS	
				Male		NS	
			Spent any time on household livestock activities	Female	Last 7 days	NS	
				Male		NS	
			Spent any time on casual labour	Female	Last 7 days	NS	
				Male		NS	
			Spent any time on wage labour	Female	Last 7 days	NS	
				Male		NS	
60+ years	Engaged in household farming activity	Female	Previous rainy season	NS			
		Male		NS			
	Spent any time on household NFE	Female	Last 7 days	3.5 pp*			
		Male		4.6 pp**			
	Spent any time on household livestock activities	Female	Last 7 days	3.7 pp*			
		Male		NS			
	Spent any time on casual labour	Female	Last 7 days	NS			
		Male		NS			
	Spent any time on wage labour	Female	Last 7 days	NS			
		Male		4.0 pp*			
LEAP	2 years	2012	Adult	Days on family farm	Females	Last season	NS
			Adult	Days on family farm	Males	Last season	NS
			Children	Days on family farm	Females and males	Last season	NS
			Household	Paid work	Females and males	Past 7 days	NS
LEAP	6 years	2016	7-17 years	Paid work	Females and males	Past 7 days	NS

NS = Impacts not significant; NFE=non-farm enterprise; * 10% significance ** 5% significance; *** 1% significance

6. Health

Morbidity and Healthcare Utilization

LEAP did not reduce morbidity, but it did increase health services utilisation when ill among children and adults.

According to official evaluation reports, LEAP 1000 increased health services utilization among adults when ill by 10.4 percentage points; however, there were no impacts of LEAP 1000 among young children (Ghana LEAP 1000 Evaluation Team, 2018). Nevertheless, an evaluation of LEAP found that after 6 years, LEAP increased the probability that children sought care when ill by 15.7 percentage points (and 28 percentage points among children 0 to 5 years), but no impacts were found among adults. LEAP 1000 also increased caregivers' knowledge of diarrhoea treatments (Ghana LEAP 1000 Evaluation Team, 2018). An in-depth study using data from the LEAP 1000 evaluation further examined impacts by age and found that these impacts on health services utilization were driven by adults aged 20-59 years, who were 11 percentage points more likely to seek healthcare when ill as a result of the programme (Novignon et al., 2022). There were no impacts of LEAP or LEAP 1000 on the probability of being ill (morbidity) among adults

or children (Ghana LEAP 1000 Evaluation Team, 2016, 2018; Ghana LEAP Evaluation Team, 2017). However LEAP did increase self-reported health among respondents (Ghana LEAP Evaluation Team, 2017), and LEAP 1000 increased self-reported happiness (Ghana LEAP 1000 Evaluation Team, 2018).

Mortality

Cash transfers reduce mortality risk in Africa, including among young children.

Impact evaluations of unconditional cash transfers (including in Ghana) have not directly examined the impacts on mortality (Pega et al., 2022). However, a study used information from cash transfer programme coverage and national mortality statistics, comparing 16 countries in Africa, Asia and Latin America and the Caribbean that implemented 29 government-led cash transfer programmes first initiated between 2000 and 2019 to 21 countries without such programmes in the same period (Richterman et al., 2023). Out of the total 37 countries examined, 29 were from sub-Saharan Africa. The study concluded that cash transfers were associated with a 20 per cent reduction in mortality risk among adult women and an 8 per cent reduction among child under 5.

TABLE 6. Child Morbidity & health services utilisation

Programme	Evaluation Time Point	Age Range	Year Impacts were measured	Indicators	Reference Period	Effect Size
LEAP	2 years	Children 0-5 years	2012	Sick/injured	4 weeks	9pp**
				Curative care	4 weeks	NS
		Preventive care		4 weeks	NS	
		Sick/injured		4 weeks	5 pp**	
	6 years	Children 6-17 years	2016	Curative care	4 weeks	NS
				Preventive care	4 weeks	NS
		Children 0-17 years		Sick/injured	4 weeks	NS
		Children 0-17 years		Sought care when ill	4 weeks	15.7 pp**
LEAP 1000	2 years	Children 0-5 years	2018	Sick/injured	4 weeks	NS
		Children 0-5 years		Sought care when ill	4 weeks	28 pp**
		Children 0-59 months		Diarrhoea	Last 2 weeks	NS
		Children 0-59 months		Acute Respiratory Infection	Last 2 weeks	NS
		Children 0-59 months		Fever	Last 2 weeks	NS
		Children 0-59 months		Treatment for Diarrhoea	Last 2 weeks	NS
Children 5-17 years	Last 2 weeks	Illness	NS			
		Sought care when ill	NS			

NS = Impacts not significant; NFE=non-farm enterprise; * 10% significance ** 5% significance; *** 1% significance

In sub-Saharan Africa specifically, cash transfers reduced the risk of mortality among women by 23 per cent). Examining sex- and age-specific impacts, effects were found to be driven by women, men aged 18 to 40 years, and children younger than 5 years. Countries with higher cash transfer coverage and larger transfer values saw larger reductions in mortality, as did countries with lower per capita health expenditures and lower life expectancy.

Health insurance uptake

LEAP increases health insurance enrolment, and effects are even larger in communities with high quality health services.

LEAP 1000 increased health insurance enrolment among adults by 14.1 percentage points and among children 5-17 years by 12.7 percentage points after two years (Ghana LEAP 1000 Evaluation Team, 2018; Palermo et al., 2019).

After 7 years, LEAP 1000 still had a positive effect on NHIS enrolment, increasing the proportion of household members enrolled by 6.6 percentage points (Ghana LEAP 1000 Evaluation Team, 2024). Similarly, LEAP increased NHIS enrolment. After 2 years, LEAP increased enrolment among households by 7 percentage points and among children 0 to 5 years by 34 percentage points and among those 6 to 17 years by 16 percentage points.

Then, after 6 years, LEAP increased the probability that adults 18 to 54 years (but not older adults) and children 0 to 5 years (but not older children) had a valid NHIS card by 10.4 and 38.1 percentage points, respectively (Ghana LEAP Evaluation Team, 2017). An in-depth study found that LEAP 1000 increased health insurance enrolment at a higher rate in communities with higher quality health services as compared to communities with lower quality health services.

TABLE 7. Adult Morbidity & health services utilisation

Programme	Evaluation Time Point	Age Range	Indicators	Reference Period	Effect Size
LEAP	6 years	Adults	Any illness	2 weeks	NS
		Adults	Sought care when ill	2 weeks	NS
		Adults	Hospitalized	12 months	-3.3 pp**
LEAP 1000	2 years	Adults 18+	Illness	Last 2 weeks	10.4 pp***
	7 years	Adults 18+	Sought care when sick	Last 2 weeks	NS

NS = Impacts not significant; NFE=non-farm enterprise; * 10% significance ** 5% significance; *** 1% significance

TABLE 8. Health insurance uptake

Programme	Evaluation Time Point	Year Impacts were measured	Age Range	Indicator	Reference Point	Effect Size
LEAP	2 years	2012	Children 0-5 years	NHIS enrolment	Current	34.0 pp**
			Children 6-17 years	NHIS enrolment	Current	16.0 pp**
			Households	NHIS enrolment	Current	7pp ^a
	6 years	2016	Adults 18-54	NHIS enrolment	Current	10.4 pp*
			Adults 55+	NHIS enrolment	Current	NS
			Children 0-5 years	NHIS enrolment	Current	38.1 pp***
LEAP 1000	2 years	2018	Adults 18+	Individual enrolled in National Health Insurance scheme	Last 12 months	14.1 pp***
			Children 5-17 years	Individual enrolled in National Health Insurance scheme	Last 12 months	12.7**
	7 years	2022	All	Share of household members with valid NHIS card	Current	6.6pp**

NS = Impacts not significant; NFE=non-farm enterprise; * 10% significance ** 5% significance; *** 1% significance

lity⁸ health services (among adults, 18 percentage point increase v. 9 percentage point increase; 25 v. 10 percentage point increase among women of reproductive age; and 20 percentage point increase v. 0 percentage point increase among children) (Otieno et al., 2022). It is important to note that the programme was designed to combine cash transfers with a premium fee waiver to enrol in the National Health Insurance Scheme, but households still had to apply for health insurance and renew their cards annually.

Among those LEAP participants who did not enrol in NHIS, the most common reasons were perceived high cost of premiums (which was a misunderstanding, as they faced no premium costs), travel costs to renew the card, and lack of understanding that NHIS enrolment expires and must be renewed annually (Palermo et al., 2019).

Birthweight

LEAP 1000 increases birthweight, reduces the risk of low birthweight, and longer exposure to LEAP 1000 in utero is associated with increased birthweight.

LEAP 1000 decreased the prevalence of low birthweight by 3.5 and 4.1 percentage points overall and during the dry season, respectively. In terms of absolute birthweight, LEAP 1000 had larger impacts on increasing weight among babies born in the dry season compared to in the rainy season (109 v. 79 grams) (S Quinones et al., 2023). Because the rainy season is generally a time of increased food insecurity (when food stocks are low) and increased risk of malaria (which is associated with increased risk of low birthweight), babies born in this period may be particularly vulnerable, and thus cash transfers may not be sufficient to overcome all these barriers to healthy birthweight.

A related study revealed found that a 1-month increase in exposure to LEAP 1000 in utero was associated with a 9-gram increase in birthweight and an a 7 per cent reduction in the odds of low birthweight, on average (S. Quinones et al., 2023). Research has also examined whether LEAP 1000 could mitigate the adverse effects of high temperatures on low birthweight.

The study found that high temperatures were associated with increased likelihood of low birthweight among babies born in households not receiving cash transfers, but there was no association between high temperatures and low birthweight in households receiving cash transfers (LaPointe et al., 2024).

These findings suggest that LEAP 1000 mitigated the adverse effects of high temperatures on low birthweight risk.

Children’s nutritional status

LEAP1000 did not improve stunting, wasting, or underweight among children under 5 years, but studies outside of Ghana have found that cash transfers can reduce stunting and wasting and increase height-for-age.

LEAP 1000 did not have effects on stunting, wasting, and underweight among children under 5. Nevertheless, LEAP 1000 did increase caregivers’ knowledge of vitamin-rich foods and the rate of exclusive breastfeeding among children under 6 months by 11.2 percentage points, which might subsequently improve children’s nutrition (Ghana LEAP 1000 Evaluation Team, 2018). Moreover, a meta-analysis examining data from 77 studies globally found that cash transfers reduced stunting and wasting and increased height-for-age (Manley et al., 2022).

TABLE 9. Stunting, wasting and underweight

Programme	Evaluation Time Point	Year impacts were measured	Age Range	Indicator	Reference Period	Effect Size
LEAP 1000	2 years	2017	Children 0-83 months	Stunting	Programme duration	NS
			Children 0-83 months	Wasting	Programme duration	NS
			Children 0-83 months	Height for age	Programme duration	NS
			Children 0-83 months	Weight for height	Programme duration	NS

NS = Impacts not significant; NFE=non-farm enterprise; * 10% significance ** 5% significance; *** 1% significance

⁸ Quality was measured using a health facility service availability and readiness scale, based on World Health Organization (WHO) guidelines.

In contrast, there were no impacts on weight-for-height or weight-for-age. A general lack of impacts on stunting and related measures in Ghana may be driven by environmental factors. Stunting is determined by a complex array of factors, and cash likely only addresses some of these factors. Children in Ghana also face a high infectious environment in comparison to children in other regions outside of Africa. In addition, African food supplies are often contaminated with fungal metabolites (Mycotoxins), which are commonly found in maize and ground nuts and are also associated with increased risk of stunting (Prendergast & Humphrey, 2014).

7. Water, Sanitation and Hygiene (WASH)

LEAP improves WASH conditions in households, particularly flooring.

Cash transfer programmes can enable households to invest in improvements to dwelling conditions and **water, sanitation, and hygiene (WASH)**. Improved WASH conditions can reduce the risk of diarrhoea, which impacts child nutritional status, and other infections. LEAP increased the probability that households had floors made out of cement by 12 percentage points, and LEAP 1000 increased the probability that households had improved floors by 4.9 percentage points. In addition, LEAP 1000 had a positive impact on the number of acceptable WASH domains (an increase of 0.14 domains, on average, out of four items).

8. Education

Attendance

LEAP 1000 increased the proportion of children who were ever enrolled in school and the proportion of children who can read and write, while LEAP enabled the most marginalized children to attend school.

LEAP 1000 increased the probability that children 6 to 17 years had **ever attended school** by 6.9 percentage points and the probability that children could **read and write** by 10.3 percentage points, as measured by impacts after 7 years (Ghana LEAP 1000 Evaluation Team, 2024). LEAP increased school enrolment among children 13 to 17 years by 7 percentage points and reduced school absences among children 5 to 17 years, as measured after 2 years (impacts were not sustained after 6 years) (Ghana LEAP Evaluation Team, 2014, 2017). An in-depth analysis using evaluation data of LEAP found that LEAP increased school enrolment among children aged 13 to 17 years with lower cognitive ability (De Groot et al., 2015). This suggests that LEAP was able to reach the most marginalized children.

9. Gender Equality Intimate Partner Violence (IPV)

LEAP 1000 reduced intimate partner violence experienced by women.

LEAP 1000 reduced the **frequency of intimate partner violence** (by 0.9 to 0.11 standard deviations) experienced by women, and also reduced the probability of **experiencing any intimate partner violence** by 7.9 percentage points among women in monogamous (but not polygamous) relationships (Peterman et al., 2022).

TABLE 10. Water, Sanitation, and Hygiene (WASH)

Programme	Evaluation Time Point	Year impacts were measured	Indicator	Effect Size
LEAP	6 years	2016	Improved Source of Drinking Water	NS
			Floor made of cement	12 pp**
			Outer walls made of cement	NS
			Flush or Pit Toilet	-28 pp***
LEAP 1000	2 years	2017	Number of acceptable domains	0.140**
			Improved floor	4.9 pp*
			Improved drinking water	NS
			Improved Sanitation	NS
			Appropriate handwashing facility	NS

NS = Impacts not significant; NFE=non-farm enterprise; * 10% significance ** 5% significance; *** 1% significance

Qualitative studies found that cash transfers reduce **economic stress** within households and **gender role strain** (when men are unable to fulfil financial responsibilities expected of them), and these are pathways through which LEAP 1000 can reduce intimate partner violence (Barrington et al., 2022; Pereira et al., 2023). In qualitative interviews exploring these pathways, men reported that LEAP 1000 **strengthened marital relationships**, and they recognized that the funds were intended for women, thereby preventing conflicts over the use of the cash (Pereira et al., 2024).

Social support

LEAP increased women's social support and participation in community groups.

LEAP 1000 increased **women's social support and community participation** and increased the probability that they were part of at least one group in the community by 4.4 percentage points (de Milliano et al., 2021). For example, LEAP enabled participants to provide social and financial support to others, and not just be on the receiving end. Another study found that LEAP increased **social capital**, enabling beneficiaries to reconnect with social networks and bolster informal social protection systems (Daidone et al., 2015).

One study revealed that LEAP assisted women in contributing to the family levy system ('abusua tow'), which aids extended family members in co-

vering expenses related to life cycle events like funerals. This subsequently enhanced the dignity, respect, and social standing of women in society (Attah et al., 2016).

Decision-making

LEAP increased women's decision-making and promotes peaceful co-existence in the home.

Qualitative evidence indicated that LEAP 1000 increased women's involvement in joint decisions with their husbands and autonomy over the use of cash transfers (Ghana LEAP 1000 Evaluation Team, 2018). Another qualitative study found that LEAP empowered women in decision-making at the household and community levels, especially regarding areas such as food purchases and strengthened **peaceful co-existence** within the household and communities (Alatinga et al., 2020). In a multi-country qualitative study across six Sub-Saharan African countries, including Ghana, found that LEAP empowered women with partial control over income and profits, as well as discretion over how to utilize the cash transfer (Fisher et al., 2017). The study also concluded that LEAP helped to restore hope and self-worth, empowering women to make livelihood-relevant choices and engage in community and economic activities without shame (Fisher et al., 2017).

TABLE 11. Enrolment

Programme	Evaluation Time Point	Year impacts measured	Age range	Indicator	Gender	Reference Period	Effect Size
LEAP 1000	2 years	2017	5 to 17 years	School enrolment	All	Current	NS
	7 years	2022	6 to 17 years	Ever attended School	All	Lifetime	6.9pp**
				Proportion of children who can read and write in English	All	N/a	10.3pp***
	2 years	2012	5 to 17 years	Missed any school	All	Past week	-8.0pp**
				School enrolment	All	Current	NS
				Missed any school	All	Past week	-10.0pp**
				School enrolment	All	Current	NS
	6 years	2016	5 to 17 years	Missed any school	All	Past week	NS
				School enrolment	All	Current	7.0pp**
	6 years	2016	5 to 17 years	School enrolment	All	Current	NS
Missed school days				All	Past week	NS	

NS = Impacts not significant; NFE=non-farm enterprise; * 10% significance ** 5% significance; *** 1% significance

10. Conclusions

- LEAP has positive spillover effects in the local economy. Investments in LEAP have a return on investment of 1.5.
- LEAP has positive effects on consumption, food security, savings, investment in livestock, and health insurance enrolment, among other outcomes.
- More impacts were seen after LEAP improved its operations, including providing regular, on-time payments and increasing transfer values to keep pace with inflation. Thus, it is recommended that LEAP implement an indexation mechanism to adjust benefits based on lagged inflation information on an annual basis to ensure that LEAP benefits are not eroded by inflation. Additionally, implementing regular and timely payments is critical for realizing maximum programme effects.
- Impacts on school enrolment and nonfarm enterprise are not as evident in Ghana as compared to other countries in Africa, and this might be explained by the relatively low transfer value, as a percentage of pre-program consumption. However, LEAP was successful in encouraging enrolment among some of the most marginalized children, which should be recognized as a success.
- Research from the Transfer Project in 12 countries has shown that transfer values that are at least 20% of baseline consumption have larger, more transformative impacts on schooling, productive activities, and other outcomes. LEAP's transfer value (13% of baseline consumption in 2017 and only 7.5% in 2022) is significantly below this threshold, and thus larger transfer values would likely translate into more transformative productive impacts, with implications for sustainable poverty reduction.
- Contextual factors can influence the impacts of LEAP. For example, impacts on health insurance enrolment are significantly larger in communities with higher quality health services. Further, impacts on birthweight were influenced by season of birth. This suggests that supply-side services (for example, education and health services) should be strengthened simultaneously while social protection programming is expanded to ensure maximum benefits of the latter. In addition, cross-sectoral linkages are important (for example, social protection programming linked to health insurance, nutrition programming, or gender-based violence prevention and response, among others).
- The lack of impacts on children's stunting may be due to several factors. First, lack of impacts may be due to relatively small sample sizes. For example, as prevalence of stunting can generally be expected to decline by approximately one percentage point per year as a result of an intervention (such as cash transfers), the number of children needed in an impact evaluation to detect such a small change can be as many as 10,000 children. However, most evaluations have a sample size of approximately 2,000 to 4,000 households and thus are more likely to detect impacts in the range of three to five percentage point decreases annually. This may explain why meta-analyses (which pool samples and estimates from multiple studies) have found small impacts, but individual evaluations such as the evaluation of LEAP 1000 tend not to find significant impacts on stunting. Other reasons for lack of impacts might relate to environmental factors. Stunting is determined by a complex array of factors, and cash likely only addresses some of these factors. Children in Ghana (and Africa more generally) face a high infectious environment in comparison to children in other regions, and African food supplies are often contaminated with fungal metabolites (Mycotoxins), which are commonly found in maize and ground nuts and are also associated with stunting (Prendergast & Humphrey, 2014).
- LEAP improves gender equality outcomes, including reducing the risk of intimate partner violence and increasing women's decision-making, social support, and participation in community groups. These impacts are important to measure and recognize, as addressing gender inequities is critical for sustainably reducing poverty. That is because women tend to have lower educational attainment, less access to land and productive assets, lower rates of financial inclusion, and lower rates of formal employment (and subsequently access to social security in old age), as compared to men. These inequities, in turn, often leads to increased poverty rates among women. Thus, to sustainably reduce overall poverty rates, these gender inequities across the lifecourse should be addressed.

11. Programme Innovations

LEAP programming has been continuously improved based on the evidence summarized here. These improvements should be recognized, celebrated, and further iterated upon to maximise programme impacts. Some of the innovations include the following:

- Payment operations have greatly improved since LEAP was introduced, and efforts have been made to have transfer values keep pace with inflation. Early evaluation results (in 2012) found that LEAP payments were irregular, and that some households may not have been receiving payments. For these reasons, impacts on consumption and well-being were lower in earlier evaluations. After that time, LEAP payment operations were greatly improved, but between 2017 and 2022 irregularity of payments was again identified as a problem (Ghana LEAP 1000 Evaluation Team, 2024).
- LEAP payments have also been eroded by inflation. In January 2012, the Government of Ghana tripled the transfer value to keep pace with inflation, and additional increases have been made since that time. Nevertheless, inflation remains a barrier to realizing the full potential of LEAP. A recent evaluation estimated that the real value of LEAP transfers was only slightly greater in 2021 than in 2010 and in 2021-2022, represented only about 5 to 7.5 per cent of the consumption of beneficiaries (Ghana LEAP 1000 Evaluation Team, 2024; ISSER et al., 2022). This is significantly below international standards (typical ranges are 15 to 20 percent). To address this issue, payments were doubled in 2023, and in 2024, the Ministry of Finance in its budget statement announced doubling of the cash grant again in 2024. To prevent further erosion of the grant value and to work towards the goal of meeting 20 per cent of household consumption, the Ministry of Finance has developed a document on 'indexation mechanism of benefit under the Livelihood Empowerment Against Poverty Cash Transfer Programme'. The main goal is to prevent depletion of the real value of the benefits to beneficiaries, and it is expected to be operationalized in 2024. This indexation mechanism has been supported by UNICEF, the World Bank and the Ministry of Gender, Children and Social Protection.
- In 2011, the Ministry of Gender, Children and Social Protection (MoGCSP) and the National Health Insurance Agency (NHIA) worked together to waive National Health Insurance Scheme (NHIS) premiums and processing fees for LEAP beneficiaries. This collaboration was formalized in 2012, under Act 852. However, NHIS enrolment must still be renewed annually. Research on NHIS uptake among LEAP beneficiaries indicated that many LEAP households were not enrolling or failing to renew NHIS annually, often due to travel costs to renew the card and lack of understanding that NHIS enrolment expires and must be renewed annually.
- Since 2020, Integrated Social Support (ISS) services have been implemented together with LEAP, with the objective of linking LEAP households with other social support services (health, child protection, sexual, and gender-based violence) to prevent and address poverty and myriad vulnerabilities faced by LEAP households (ISSER et al., 2022). ISS is an intersectoral collaboration between the Ministry of Gender, Children and Social Protection (MoGCSP), the Office for the Head of Local Government Service, the National Health Insurance Authority, and the Ghana Health Service, in partnership with UNICEF. Under the ISS, efforts have been made to limit bureaucracy and facilitate effective registration of LEAP beneficiaries and indigents into the NHIS through the collaborative efforts of all stakeholders. These efforts have included coordinating and supervising Regional and District Offices of NHIA to increase membership through community outreach (mobile renewal initiatives in communities, bussing participants to NHIA offices, and gathering expired cards and taking them directly for renewal) and not requiring LEAP beneficiaries to be physically present for renewal (cards can be submitted on their behalf). The NHIA has made steady progress in expanding coverage, especially for vulnerable groups. LEAP has made excellent progress in facilitating NHIS uptake among LEAP households. The LEAP Management Secretariat estimates that 76 percent of LEAP beneficiaries are currently covered enrolled in NHIS.
- Moreover, ISS activities are integrated into the Ghana Health Service home visits through Community-based Health Planning and Services (CHPS). Community health officers (CHOs) identify high-risk social protection cases requiring social and medical attention as part of their integrated care. A guidance note and job aid for frontline health workers have been developed to aid CHOs in their work relating to cases that require referral and coordination with other service providers

Acknowledgments

This summary document was commissioned by UNICEF Ghana and drafted by Policy Research Solutions (PRESTO). Authors included Tia Palermo and Prince Changole. The authors thank Christiana Gbedemah, Robert Osei-Tutu, and Pauliina Mulhovo for helpful comments on an earlier draft.

References

- Alatinga, K. A., Daniel, M., & Bayor, I. (2020). Community experiences with cash transfers in relation to five SDGs: exploring evidence from Ghana's Livelihood Empowerment Against Poverty (LEAP) Programme. *Forum for Development Studies*,
- Alkire, S., Kanagaratnam, U., & Suppa, N. (2020). The global Multidimensional Poverty Index (MPI): 2020 revision' (OPHI MPI Methodological Note 49, Issue.
- Amofa, S. K., Owusu, G. M.Y., Bawole, J. N., & Atta, M. (2023). Eradicating extreme poverty in Africa through productive inclusion: A comparative assessment of two social protection programmes in Ghana. *International Review of Administrative Sciences*, 89(3), 883-900.
- Amuzu, C., Jones, N., & Pereznieto, P. (2010). Gendered risks, poverty and vulnerability in Ghana: To what extent is the LEAP cash transfer programme making a difference. London: ODI.
- Attah, R., Barca, V., Kardan, A., MacAuslan, I., Merttens, F., & Pellerano, L. (2016). Can social protection affect psychosocial wellbeing and why does this matter? Lessons from cash transfers in sub-Saharan Africa. *The Journal of Development Studies*, 52(8), 1115-1131.
- Barrington, C., Peterman, A., Akaligaung, A. J., Palermo, T., de Milliano, M., & Aborigo, R. A. (2022). 'Poverty can break a home': Exploring mechanisms linking cash plus programming and intimate partner violence in Ghana. *Social Science & Medicine*, 292, 114521.
- Daidone, S., Pellerano, L., Handa, S., & Davis, B. (2015). Is graduation from social safety nets possible? Evidence from Sub-Saharan Africa. *IDS Bulletin*, 46(2), 93-102.
- De Groot, R., Handa, S., Park, M., Darko, R. O., Osei-Akoto, I., Bhalla, G., & Ragno, L. P. (2015). Heterogeneous impacts of an unconditional cash transfer programme on schooling: evidence from the Ghana LEAP programme. UNICEF Office of Research–Innocenti Working Paper WP-2015-10.
- de Milliano, M., Barrington, C., Angeles, G., & Gbedemah, C. (2021). Crowding-out or crowding-in? Effects of LEAP 1000 unconditional cash transfer program on household and community support among women in rural Ghana. *World Development*, 143. <https://doi.org/10.1016/j.worlddev.2021.105466>
- Fisher, E., Attah, R., Barca, V., O'Brien, C., Brook, S., Holland, J., Kardan, A., Pavanello, S., & Pozarny, P. (2017). The livelihood impacts of cash transfers in sub-Saharan Africa: beneficiary perspectives from six countries. *World Development*, 99, 299-319.
- Fuseini, M. N., Enu-Kwesi, F., & Sulemana, M. (2019). Poverty reduction in Upper West Region, Ghana: role of the Livelihood Empowerment Against Poverty programme. *Development in Practice*, 29(6), 760-773. <https://doi.org/10.1080/09614524.2019.1586833>
- Ghana LEAP 1000 Evaluation Team. (2016). Ghana LEAP 1000 Programme: Baseline Evaluation Report.
- Ghana LEAP 1000 Evaluation Team. (2018). Ghana LEAP 1000 Programme: Endline Evaluation Report.
- Ghana LEAP 1000 Evaluation Team. (2024). Ghana LEAP 1000 Programme: Seven-Year Evaluation Report
- Ghana LEAP Evaluation Team. (2014). Livelihood Empowerment Against Poverty Programme Impact Evaluation
- Ghana LEAP Evaluation Team. (2017). Ghana Livelihood Empowerment Against Poverty Programme: Endline Impact Evaluation Report.
- Handa, S., Otchere, F., Sirma, P., & Team, E. S. (2022). More evidence on the impact of government social protection in sub-Saharan Africa: Ghana, Malawi, and Zimbabwe. *Development policy review*, 40(3), e12576.
- Hidrobo, M., Hoddinott, J., Kumar, N., & Olivier, M. (2018). Social Protection, Food Security, and Asset Formation. *World Development*, 101, 88-103.

- ISSER, University of North Carolina, Navrongo Health Research Centre, & Innocenti, U. O. o. R.-. (2022). Base-line Report for "Ghana LEAP and Integrated Social Services Impact Evaluation (2021 Phase 1).
- LaPointe, S., Mendola, P., Lin, S., Tian, L., Bonell, A., Adamba, C., & Palermo, T. (2024). Impact of cash transfers on the association between prenatal exposures to high temperatures and low birthweight: Retrospective analysis from the LEAP 1000 study. *BJOG: An International Journal of Obstetrics & Gynaecology*.
- Manley, J., Alderman, H., & Gentilini, U. (2022). More evidence on cash transfers and child nutritional outcomes: a systematic review and meta-analysis. *BMJ global health*, 7(4), e008233.
- Novignon, J., Prencepe, L., Molotsky, A., Valli, E., de Groot, R., Adamba, C., & Palermo, T. (2022). The impact of unconditional cash transfers on morbidity and health-seeking behaviour in Africa: evidence from Ghana, Malawi, Zambia and Zimbabwe. *Health Policy Plan*, 37(5), 607-623. <https://doi.org/10.1093/heapol/czac014>
- Osei, K. B., & Turkson, D. (2022). Cash transfer and multidimensional child poverty: Evidence from Ghana. *International Journal of Social Economics*, 49(5), 744-764.
- Osei, R. D., & Lambon-Quayefio, M. (2021). Cash transfers and the supply of labor by poor households: Evidence from the livelihood empowerment against poverty program in Ghana. *Review of Development Economics*, 25(3), 1293-1304.
- Otieno, P., Angeles, G., Quiñones, S., van Halsema, V., Novignon, J., & Palermo, T. (2022). Health services availability and readiness moderate cash transfer impacts on health insurance enrolment: evidence from the LEAP 1000 cash transfer program in Ghana. *BMC Health Services Research*, 22(1), 599.
- Palermo, T. M., Valli, E., Ángeles-Tagliaferro, G., de Milliano, M., Adamba, C., Spadafora, T. R., & Barrington, C. (2019). Impact evaluation of a social protection programme paired with fee waivers on enrolment in Ghana's National Health Insurance Scheme. *BMJ open*, 9(11), e028726.
- Pega, F., Pabayo, R., Benny, C., Lee, E.-Y., Lhachimi, S. K., & Liu, S. Y. (2022). Unconditional cash transfers for reducing poverty and vulnerabilities: effect on use of health services and health outcomes in low and middle-income countries. *Cochrane Database of Systematic Reviews*(3).
- Pereira, A., Akaligaung, A. J., Aborigo, R., Peterman, A., Palermo, T., & Barrington, C. (2023). 'Joy, not sorrow': Men's perspectives on gender, violence, and cash transfers targeted to women in northern Ghana. *SSM-Qualitative Research in Health*, 3, 100275.
- Pereira, A., Barrington, C., Handa, A., & Pettifor, A. (2024). Cash transfers, relationship dynamics, and intimate partner violence among youth in Malawi. University of North Carolina at Chapel Hill.
- Peterman, A., Valli, E., & Palermo, T. (2022). Government Antipoverty Programming and Intimate Partner Violence in Ghana. *Economic Development and Cultural Change*, 70(2), 529-566. <https://doi.org/10.1086/713767>
- Prendergast, A. J., & Humphrey, J. H. (2014). The stunting syndrome in developing countries. *Paediatrics and international child health*, 34(4), 250-265.
- Prifti, E., Estruch, E., Daidone, S., & Davis, B. (2018). How differences in cash transfer sizes affect work allocation decisions: evidence from cross-country comparisons in SSA. *LABOUR*, 32(3), 395-426.
- Quinones, S., Lin, S., Tian, L., Mendola, P., Novignon, J., Adamba, C., & Palermo, T. (2023). The dose-response association between LEAP 1000 and birthweight- no clear mechanisms: a structural equation modeling approach. *BMC Pregnancy Childbirth*, 23(1), 364. <https://doi.org/10.1186/s12884-023-05707-1>
- Quinones, S., Mendola, P., Tian, L., Lin, S., Novignon, J., Angeles, G., & Palermo, T. (2023). Ghana's livelihood empowerment against poverty (1000) program seasonally Impacts Birthweight: a difference-in-differences analysis. *International journal of public health*, 68, 1605336.
- Richterman, A., Millien, C., Bair, E. F., Jerome, G., Suffrin, J. C. D., Behrman, J. R., & Thirumurthy, H. (2023). The effects of cash transfers on adult and child mortality in low-and middle-income countries. *Nature*, 1-8.
- Thome, K., Taylor, J. E., Filipski, M., Davis, B., & Handa, S. (2016). The local economy impacts of social cash transfers: A comparative analysis of seven sub-Saharan countries. Food and Agriculture Organization of the United Nations (FAO).