



Cash transfers, resilience and child labour in Ghana

A study to evaluate the impacts of a cash transfer programme designed to address child labour in cocoa-growing areas in Ghana.

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COCOA
Initiative

Protecting children and their families in cocoa growing communities

ICI is a non-profit foundation that works to ensure a better future for children in cocoa-growing communities. We are a multi-stakeholder partnership advancing the elimination of child labour and forced labour, by uniting the forces of the cocoa and chocolate industry, civil society, farming communities, governments, international organizations and donors. We innovate, catalyse and support the development, implementation and scale-up of effective policies and practices that promote child rights and that prevent or remediate child labour and forced labour in cocoa.

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Executive Summary

This study examines the impacts of an unconditional cash transfer programme on cocoa-growing households in Ghana. The pilot project aimed to test whether cash transfers can help reduce hazardous child labour. It also examines what other impacts cash transfers have on children and their families in this context.

Background

The cash transfer programme was designed and implemented by the International Cocoa Initiative (ICI) in two certified farmer groups in the Ahafo and Eastern regions. It was funded by an innovation grant from Switzerland's State Secretariat for Economic Affairs (SECO).

Cash payments were unconditional but accompanied by an information campaign encouraging farmers to use it to support their children and protect them from hazardous work. Over a period of 6 months, each household was paid a monthly amount ranging between GHS 114 (USD 18) and GHS 228 (USD 37), where the sum increased depending on the number of school-age children. When compared to household budgets reported at baseline, the cash payment corresponded to 28% of households' monthly estimated expenditure. The transfers were paid via mobile money.

Method

To rigorously evaluate the impact of the cash transfer programme, we set up a randomized control trial, in which the participating households were randomly split into two groups. Following a baseline survey in June-July 2019, the first group received the cash payments in six monthly instalments. Then an endline survey of all households was conducted in April 2021. After this, payments to the second group of households were made in six monthly instalments. Households in the second group served as a "control group" in the analysis of the survey data.

The analysis is based on full sets of baseline and endline data from 644 households, including more than 1,100 children aged 5-17.

The cash experiment coincided with the outbreak of the Covid-19 pandemic, during which measures were taken to contain the spread of the virus. All schools in Ghana were closed between April 2020 and January 2021. Schools reopened just a few weeks before the endline survey.

Use of cash, context and shocks

Mobile money proved to be an efficient and reliable way of transferring cash to cocoa farmers in Ghana. Only about 6% of households faced challenges in receiving the cash, mostly related to blocked sim cards or mobile money accounts, lack of knowledge about how to operate mobile money, or because intermediary recipients were absent from the household.

By design, the cash was paid to the registered member of the farmer group, who were mostly male. Households reported that in most cases, decisions about spending the cash transfer were made by the person who received it on their phone. A more gender equitable approach should include cash transfers to women, as well as to men.

Some of the cash trickled through to a wider group of beneficiaries, beyond those for whom it was initially intended: 13% of cash recipient households were asked to care for additional family members since they started receiving the cash transfer, and 12% of the recipient households reported having been asked for help from community members in financial need.

The Covid-19 pandemic had tangible effects on the cocoa farming households participating in the experiment, but as an economic crisis, rather than as a health crisis. Almost half of the households – 46% – reported an income loss due to the Covid-19 pandemic. On average these households lost around 21% of their annual income at baseline, mainly due to the limited availability and inflated prices of adult labour, temporary suspension or reduced turnover from small business activities, and obstacles to market access for agricultural products.

In addition, two thirds of households (66%) experienced an unexpected adverse event, unrelated to the Covid pandemic, which affected their livelihood in the period between the two surveys. Almost half of these households reported a health-related challenge, such as sickness or death in the family. Other frequently reported adverse events include a strong increase in prices, loss of employment, and high levels of crop disease or pests causing a drop in agricultural production. Both groups of households were equally likely to experience an adverse event affecting their livelihood, but their ability to cope with these differed.

Impacts of the cash transfer on households and children

The cash transfer allowed households to build up wealth, measured through assets acquired during the cash payment period, such as phones, household appliances and furniture. It also made households more resilient to adverse shocks, such as sickness or an unexpected loss of income. Adverse shocks were experienced by around two thirds of the households in the sample, but households that received cash transfers were more likely to cope with the shock *without* reducing their food consumption.

The cash transfer reduced hazardous child labour. Our results show that the cash transfer reduced the likelihood of a child doing hazardous work in the past six months by 9.3 percentage points. The average prevalence of hazardous child labour in our sample at endline was 58%, so this reduction is equivalent to a 16% decrease. However, we cannot see an effect on its severity – there is no significant change in the average number of hazardous activities reported by children.

Children benefitted in other ways too: their material wellbeing improved, as measured by the child's ownership of basic items such as a blanket and a second set of clothes. The cash transfers also protected children against adverse events. Among households that did *not* receive the cash transfer, child labour increased in the case of an adverse event.

Conclusions

The results show that unconditional cash transfers paid to farmers in Ghana can be an effective component of a strategy to prevent and address hazardous child labour in cocoa growing areas. Cash

transfers can protect households and children against adverse shocks, such as sickness, bereavement in the family, income fluctuations or loss of agricultural production.

The findings of this study are consistent with a broader body of evidence showing that cash transfers lead to positive outcomes for households and children, including reduced child labour and increased child wellbeing. While evidence from cash transfer programmes in other contexts shows that in some cases, cash transfers have *increased* child labour, this pilot cash transfer has managed to avoid such adverse effects.

Overall, while the reduction in hazardous child labour achieved here is promising, the prevalence of child labour at endline remains relatively high. This suggests that cash transfers alone cannot solve child labour and that income support should be embedded in broader strategies to prevent and address child labour in cocoa production.

1

Background

Introduction to the project

This study examines the impacts of an unconditional cash transfer programme on households from two cocoa farmer groups in Ghana’s Ahafo and Eastern regions.

The pilot programme was designed and implemented by the International Cocoa Initiative (ICI). It aimed to test whether cash transfers could help reduce child labour. It was funded by an innovation grant from Switzerland’s State Secretariat for Economic Affairs (SECO). The project was carried out in close collaboration with ECOM, as the two farmer groups formed part of their supply chain.

The pilot was implemented as a randomized controlled trial. This allowed a rigorous evaluation of the impacts of a cash transfer on hazardous child labour on cocoa farms, as well as on other outcomes for households and children.

Following a baseline survey, the participating households were randomly split into two groups. The first group received unconditional cash payments in six monthly instalments, then an endline survey of all households was conducted. Payment to the second group of households was delayed until after the endline survey. Households in the second group served as a “control group” in the analysis of the survey data.

The cocoa producing households selected for the experiment were members of two certified farmer societies in Asunafo South district in Ahafo Region (formerly Brong-Ahafo Region) and Suhum district in Eastern region in Ghana.

Design of the cash transfer programme

The design of the cash transfer programme was informed by consultations with a wide range of stakeholders at national level, including academic experts, government, private sector partners, and by a [literature review on impacts of cash transfers on child labour](#), conducted at the start of the project.

The literature review showed that cash transfers – both conditional and unconditional – can reduce child labour in agricultural households, if designed carefully. The cash amount should be substantial enough to allow families to cover school-related expenditure and at the same time compensate for any income lost from children’s work. The design should not encourage households to start new business activities which would increase the need for family labour, which could result in children working more rather than less – a risk identified in the literature review.

Figure 1: Cash transfer amount

GHS 114 (\$18) basic fixed sum	+15 (\$2.40) for each primary age child	+30 (\$4.80) for each secondary age child	= 228 max. (\$37) maximum transfer amount
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For this project, each household was paid a fixed sum of GHS 114 (USD 18) per month, topped up by an extra GHS 15 (USD 2.40) for each child at primary school age, and GHS 30 (USD 4.80) for each child at secondary school age. The total amount a household could receive was capped at GHS 228 (USD 37) per month, resulting in a maximum payment amount of GHS 1’368 (USD 221). When

compared to household budgets reported at baseline, the cash payment corresponded to 34% of average monthly income, and 28% of their monthly estimated expenditure.

The cash was disbursed to households through a mobile money scheme. It was paid unconditionally, but accompanied by an information campaign. Staff explained to all households the overall aim of the project, experimental set-up of the cash transfer, the scale of the pilot and its limited duration.

Households were also informed that no eligibility criteria were applied other than participation in the baseline survey, and that the cash was not tied to any conditions. The message communicated to households was:

“You can spend the cash transfer as you like. But as a responsible cocoa farmer, you are encouraged to support the education and wellbeing of your child(ren), and ensure they are not exposed to hazardous work”,

Households were also reminded of the tasks considered hazardous to children and forbidden under national legislation.

2

Data and method

Baseline and endline surveys

In June and July 2019, a **baseline survey** assessed the prevalence of child labour prevalence among all farmers targeted by the project. Around 33% of the farmers listed as certified members of the farmer groups were either not available during the period of data collection, no longer supplying cocoa to ECOM, or had moved away. Full baseline information was collected from 705 eligible households, with at least one child aged 5-17.

The survey contained a household questionnaire, administered to the head of household or if unavailable, another senior adult in the household; and a child questionnaire, for each child aged 5-17. The household questionnaire collected basic demographic information on all household members; detailed information about household finances, including household income from agriculture and non-agriculture sources, household expenditure and loans; assets owned by the household; and farming practices, including use of hire labour and agricultural inputs. The child module collected information on children's schooling and work, including questions about when children worked, where, for how long, which activities they had done, whether they had suffered any injuries, and whether their schooling had been affected by work.¹²

When processing the data, we follow the definitions for *child labour* and *hazardous child labour* in Ghana's national legislation.³

Figure 2: Hazardous activities in cocoa according to Ghana's *Hazardous Activity Framework*

Hazardous activities in cocoa cultivation

- Clearing of forest and/or felling of trees
- Bush burning
- Exposure to agro-chemical (spraying, fertilizer application etc.)
- Working with motorized farm machinery (i.e., mist blower, knapsack sprayer, ...)
- Harvesting overhead cocoa pods with harvesting hook
- Breaking cocoa pods with breaking knives
- Removing tree stumps
- Using machetes/long cutlass for weeding or pruning
- Working without adequate basic foot / body protective clothing
- Working alone on the farm in isolation (i.e., beyond visible or audible range of nearest adult)
- Climbing trees higher than 2.5 meters to cut mistletoe or harvest or prune with sharp cutlass or implement
- Carrying heavy load beyond permissible carrying weight i.e., above 30% of body weight for more than 2 miles (3 km)
- Working at night (between 6:00pm - 6:00am)

Following the analysis of the baseline data and stakeholder consultations on the targeting and design of the cash transfer, cash payments to households in the first group were paid in 6 monthly instalments between Sept 2020 and February 2021.

¹ The baseline survey data was also used to test whether a predictive model, constructed from the Tulane child labour survey in 2013/14, could correctly predict child labour, using household information available in the ECOM farmer register. This is documented in a separate report: *ICI (2020), Predicting child labour risk at the household level*.

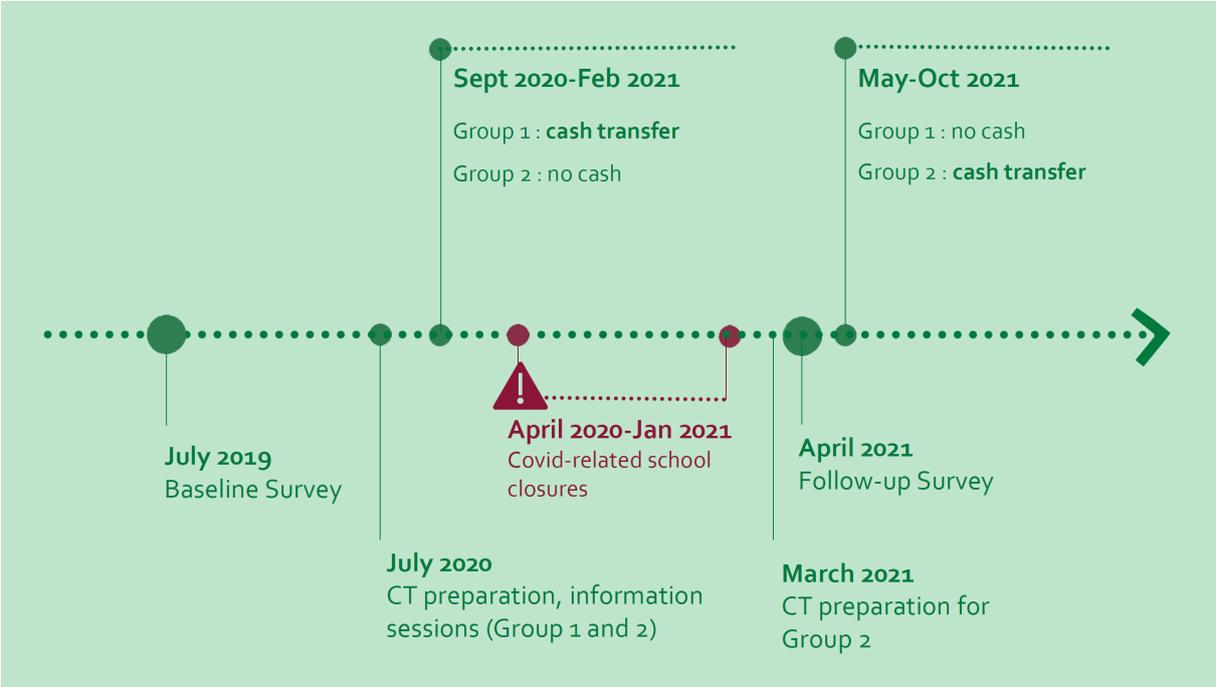
³ Philip K. Amoo (2008) *Hazardous Child Labour Activity Framework for Ghana*, commissioned by Ministry of Employment and Social Welfare and extended in 2014.

The pilot coincided with the outbreak of the Covid-19 pandemic and with the measures taken to contain the spread of the virus. All schools in Ghana were closed between April 2020 and January 2021.

The cash experiment coincided with the outbreak of the Covid-19 pandemic and with the measures taken to contain the spread of the virus. All schools in Ghana were closed between April 2020 and January 2021. Schools reopened just a few weeks before the collection of endline data.

Prior to the pandemic, the academic year used to run from September to July. Subsequently, it was decided to start a new school year with the reopening in February 2021 and adjust future academic cycles to from February to December.

Figure 3: Timeline of events surrounding the cash transfer experiment



An **endline survey** was administered to all households immediately after the first wave of transfers in April 2021. The prevalence of child labour in cocoa production in West Africa is highest during the peak cocoa harvest period, which in Ghana falls in the months of October-January.⁴ March to July is the main season for application of agrochemicals and land preparation, with a range of hazardous tasks related to these activities often done by children. Also, child labour prevalence is expected to be higher during school holidays as children have more time available to help with farm work.

Because of these seasonal patterns, we would expect to see overall differences in child labour prevalence between baseline and endline surveys, that would affect all households equally, both those that already received the transfer and those who did not:

⁴ See for example ICI 2020 “Effectiveness review of Child Labour Monitoring and Remediation Systems in West African cocoa sector”, pp.42-44.

- The baseline survey was collected 5 months after the end of the main harvest season and also at the end of the main spraying and land preparation period. The academic year had just ended when the survey was conducted.
- The endline survey was conducted 3 months after the end of the main harvest season, but during main spraying and land preparation period. Schools had just reopened after a long Covid-related closure (see Figure 3, above) so compared to the baseline, we would expect several differences: higher school attendance; less of children's time available for farm work; higher school-related expenditures in the weeks preceding the survey (for school uniforms, school materials, etc.).

The endline survey included the same questions as the baseline survey, but with a few additional elements:⁵

- **Group-specific questions:** households in the first group were asked to provide detailed information on use of the cash transfer received and their feedback on the modalities of the scheme. Households in the second group were asked whether they had spent any money in anticipation of the cash transfer.
- **Unexpected shocks:** all households were asked whether they had experienced any unexpected shocks in the period since the baseline survey (such as serious sickness or death of family members; large changes in income unrelated to the cash; weather events affecting their agricultural output; or any other types of shocks). They were also asked how they had coped with these unexpected events, and whether the shock had translated into a reduction in the household's food consumption.
- **The Covid-19 pandemic:** Third, households were asked explicitly whether and how they had felt the effects of the Covid-19 global pandemic and measures taken to contain the virus.

Sample

Of the 705 households who participated in the baseline survey and were eligible to receive cash, 32 of the households allocated to group 1, and 29 households allocated to group 2 could not be included in the cash experiment, as by the time the ICI field team reached out the households to prepare the cash disbursements (i.e., verified phone numbers) they had left the communities. These were caretaker farmers whose contracts were probably not renewed by their employer (the farm owner) and moved elsewhere. Beyond these cases, there was no additional attrition to the sample between the baseline and endline survey.

Full sets of baseline and endline data are available from 644 households, 270 in group 1 (receiving the first wave of cash, the "treatment group") and 374 in group 2 (receiving cash after the endline survey, the "control group").

In these households, a total number of 1,173 children aged 5-17 were interviewed during the endline survey (504 children in group 1 households and 669 children in group 2 households). For 799 children, baseline data is also available.

The main analysis of household outcomes is hence based on a merged data set of **baseline and endline information from 644 households**. The main analysis of child outcomes is based on the

⁵ For some elements (for example household members, wealth assets owned by the household, income sources), households were asked explicitly whether there had been any change since the baseline survey.

available **1,173 endline child interviews**, linked to the baseline and endline information from their households.⁶

Identification of causal effects

As mentioned, households were allocated to one of two groups through a random draw. Randomized experiments are often referred to as the “gold standard” for impact evaluations, since the random allocation of units to treatment and control groups is the most effective way to rule out any selection bias which is typically present in real-world interventions. In other words, in a randomized experiment, there is no reason to assume that the treatment group is different from the control group in terms of their vulnerability, attitudes, aspirations, etc., because of any selection or self-selection. Instead, if we see any differences between the two groups after the intervention, we can confidently interpret these as results of the intervention.

The absence of observable differences between the two experimental groups can be verified if baseline data is available, which is the case here. First, we conduct means difference tests on key household variables which are known to be linked to child labour use (including demographic information on household head, household composition, migration status, wealth, income and farming parameters; see e.g. [ICI 2021, Risk models for predicting child labour](#)). The results are shown in Table 1, where we can see that the two groups are very similar on all household characteristics we have examined, with only one exception, which is household size. Households in group 2 are on average slightly larger than those in group 1 (6.7 members against 6.4 members, and this difference is statistically significant). We therefore include household size as a control variable in all regressions in the following analysis.

Table 1: Comparison of baseline characteristics between cash recipient and control group

Variables	control group	cash recipient group	mean difference
share of female-headed households	0.187	0.148	0.0390
household head's education level (on a 1-6 scale)	2.648	2.677	-0.0290
age of household head	51.87	52.29	-0.423
# of years lived in the community	34.35	32.34	2.013
household size	6.388	6.733	-0.346*
# of children age 5-17 in the household	2.545	2.626	-0.0800
# of nonbiological children in the household	0.821	0.796	0.0250
index of wealth assets (PCA)	0.00500	-0.00700	0.0120
index of wealth assets (sum of assets)	6.051	6.019	0.0320
cocoa farm size (acres)	8.893	8.350	0.543
bags of cocoa produced last year	20.38	19.73	0.651
total income past year (GHS)	9692	9711	-18.51
amount spent on labour past year (GHS)	778.8	835.6	-56.74

*indicates statistically significant difference (t-test) between groups (>0.05)

⁶ Some children interviewed at baseline could not be included in the endline survey because they had by then turned 18 years old or left the households. Reversely, some children interviewed at endline were not yet 5 years old, had joined the household in the meantime or were not present during the baseline data collection. Full sets of baseline and endline data are available for a sub-sample of 799 children only.

3

Use of cash, context and shocks

Cash transfer feasibility and intra-household decision making

During the consultations in the first phase of the project, mobile money was identified as the most efficient channel to disburse the cash transfer to the cocoa farming households. When preparing the payments, the ICI field team identified 49 households in total (group 1 and group 2) who did not own mobile phones. These households were equipped with mobile phones by ICI as part of the project.

The endline data collection confirmed that in 94% of the households of the first group, the cash was received directly by the household member registered by Ecom as a cocoa producer. In the remaining 6% of the households in group 1, the cash was received by an intermediary (in most cases spouse, children or other family members of the registered farmer). In seven of these households, the intermediary recipient was no longer living with the household, which obviously complicated but did not prevent the handover of the cash to the intended recipient. The endline data collection revealed two cases of recipient households in group 1 where an intermediary retained about GHS 30 per monthly instalment as a transfer fee, before handing over the cash to the intended recipient.

In total, 16 of the households in group 1 reported some sort of challenge receiving the transfer. Other than those described above, the most frequent challenges cited by the households were misplaced or blocked sim cards, lack of knowledge about how to operate mobile money, and the mobile money account being blocked.

When asked **who within the household had control over the use of the cash**,⁷ with very few isolated exceptions, all respondents stated that the person receiving the cash also kept it under their control and was the main decision maker on its use. Since women made up only 19% of the share of registered producers, this implied that the control over the cash was mainly in the hands of male heads of households. In 11 households (4% of the responding households), control over the cash was handed over from the recipient to their spouse. In only three households, respondents stated that control over the cash was held jointly by the spouses.

However, in 63% of the recipient households, the respondents stated that individual who received the cash consulted with other members of the household on how the cash should be spent; this was in most cases (in 50% of households) the spouse (whereby consulting the spouse on cash usage was more common amongst the male cash recipients than amongst the female cash recipients); and in 12 households (5%) children were consulted on cash usage.

To conclude, first of all the mobile money channel proved to be an efficient and reliable way of transferring cash to cocoa farmers in the context of Ghana, with a some additional project support needed to ensure availability of mobile phones in all households. For any future cash transfer projects, the risk that phones may travel away from the intended recipient household, even if quite marginal, needs to be monitored.

Second, by design of the project the cash transfer recipients in this experiment were in large majority male. If the intention of a cash transfer in future was to give more control over the use of the money to women, the cash should be transferred to mobile phones owned by women; and the project would potentially have to invest additional funds to equip women with their own phones.

⁷ Of the 270 households who received cash, 258 respondents (96%) were aware of the cash transfer, while 11 (4%) were not aware or unsure. Detailed questions on payments received and use of the cash were then only asked to those respondents who were aware of the cash transfer. When asked about the monthly amount received, out of 258 respondents, 56 (22%) quoted the true amount of cash allocated to the household; 29 respondents (11%) overstated the amount; and 160 respondents (62%) understated the amount; the remaining respondents were unsure.

How has the cash transfer been used?

The survey shows that some of the cash had trickled through to a wider group of beneficiaries, beyond those for whom it was initially intended. According to the survey, 13% of cash recipient households (35 households) were asked to care for additional family members since they started receiving the cash transfer. These households reported that they now care for an additional 2.5 people on average. Even though caring for additional family members may not necessarily mean that these family members are now living with the household, we take a closer look at new household members who joined these 35 households since the baseline survey. It turns out that children aged 5-17 make up about 44% of new family members (37 children in total have joined these 35 households); adults make up 43% (36 adults in total have joined these 35 households); and young children up to the age of 4 years make up 13% (11 young children in total have joined these 35 households). Half of the newly joined children in these 35 households are non-biological children of the head of household.

An additional 12% of the recipient households reported that because they received a cash transfer, they had occasionally been asked for help from community members in financial need.

As an additional factor which may potentially veil the impact of the cash in the analysis, 37% of the group 2 households (140 households) reported that they had already spent some money in anticipation of the cash transfer, which they were due to start receiving shortly after the endline survey. We therefore exclude these households from the control group as a robustness check on all the results reported in the following analysis.

How did Covid-19 affect households?

The Covid-19 pandemic had very tangible effects on the cocoa farmers participating in the experiment, but as an economic crisis, rather than as a health crisis. Of all the households in both groups, almost half - 46% - reported that they had experienced an income loss due to the Covid-19 pandemic.⁸

Almost half of all households reported losing income due to the Covid-19 pandemic

On average these households estimated to have lost around GHS 1'700 (USD 272) since the outbreak of the pandemic in March 2020. This corresponds to 21% of the average annual income estimated at baseline. Table 2 shows the reasons they gave for losing income. The limited availability and inflated prices of adult labour; temporary suspension or reduced turnover from small business activities; and obstacles to market access for agricultural products were the most common reasons. Some farmers also reported that there had been delays in payments for the sale of cocoa, in some cases up to several months. While these delays do not present reductions in income over the medium term, they posed short-term liquidity constraints to households who depend very strongly on their cocoa income to cover basic household needs. As we did not ask specifically about this, more households may have been affected by these delays.

⁸ There were also a few cases (11 households, or 1.4 % of the sample) of households who reported an income gain related to the Covid-19 pandemic. Unfortunately the survey data does not provide further context to these cases.

There are no statistically significant differences between group 1 and group 2 households in how they have been affected by the pandemic.

Table 2: Reasons for income changes related to the Covid pandemic

Income changes related to the Covid pandemic	% of households	# of households
Agricultural income	22,7%	146
Labour income	5,4%	35
Income from trade or self-employment	12,6%	81
Remittances	1,2%	8
Social transfers	0,2%	1
Other income	7,8%	50

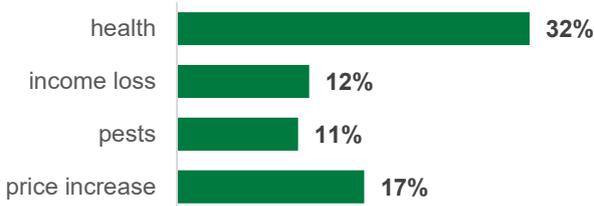
Which adverse shocks have households experienced?

Most households reported that they had experienced some unexpected adverse event, unrelated to the Covid pandemic, which had affected their livelihood in the period between the two surveys. Two thirds of households (66%) experienced at least one such shock, and 19% of households experienced multiple shocks.

Of these households, almost half reported a health-related shock, such as sickness, injury or death of a family member. Strong increase in prices of food or agricultural inputs, income losses or employment, and high levels of crop disease or pests affecting agricultural production were also reported frequently (see Figure 4).

In total, 43% of households in the sample stated that this unexpected shock translated into the household having to reduce their food consumption. As expected, there are no statistically significant differences between households of the two groups in the likelihood of experiencing an adverse shock. There are however differences between the groups in how the shocks were absorbed, which are discussed in the following chapter.

Figure 4: Share of households in the sample who experienced different types of unexpected shocks



5

Impacts on households and children

Effects of the cash transfer on households

We examined two effects at household level: first whether the cash transfer helped households to accumulate wealth, measured through their ownership of assets; and second whether the cash transfer helped households to cope in the face unexpected adverse events such as sickness, death of a family member, reduced agricultural production, or another loss of income.

How did we measure the impact of the cash transfers on households?

To assess how the cash transfer has affected various outcomes, we use multiple regression analysis, with a binary indicator for whether the household has received a cash transfer as the main explanatory variable of interest.

We add the following control variables to the household level regressions:

- **Household size:** indicator variables for the category of household size at baseline (up to 5 members; 6-10 members; 11-15 members; more than 15 members)
- **Assets:** indicators for the household's level of wealth at baseline (the sample is split into quartiles based on an index of wealth assets⁹ owned by the household, where "1" means belonging to the 25% poorest and 4, belonging to the 25% wealthiest households in the sample)
- **Income:** the household's estimated total annual income at baseline
- **Location:** an indicator variable for the region.

How has the cash transfer affected household wealth?

To measure the **development of household wealth**, we examine whether households have acquired assets, such as household appliances, communication and media devices, furniture, or vehicles, or have made home improvements. We measure the total number of new household goods acquired since the baseline survey. This variable ranges from 0 to 9 and has a mean value of 1.4 in the sample.

The results show that the cash transfer helped households to build up wealth.

The regression results show that the cash transfer helped households to build up wealth. Households who received the cash have on average acquired 0.3 more new assets compared to the control households, as shown in Table 3, column 1.

When we also take into account the number of additional family members the household cares for since they have received the cash, and whether other community members in need had asked the household for financial support, we see that adding these variables as controls does not change the cash effect on wealth building at first. This is shown in column 2 of Table 3: on the one hand, caring for additional family members led to the acquisition of more new items, with households acquiring 0.2 new items on average for each additional family member. The main assets acquired by these households were phones. Conversely, when households were asked for help by community members, this

⁹ The questionnaire asked households whether they owned each of 9 different household items such as household appliances, communication devices, vehicles, furniture; and about the quality of their housing, water and lighting source. These 12 items were combined into a single wealth score using principal component analysis. Each household is then assigned a wealth quartile within the sample based on their wealth score.

reduced their ability to accumulate wealth: households that had been asked for help acquired fewer new items on average.

However, if we exclude from the control sample those households who reported that they had already spent some money in anticipation of the cash transfer to come, as shown in column 3, we can see that **the effect of the cash on wealth accumulation is even larger** in this reduced sample, with cash recipients having acquired 0.35 more new items on average than control households.

Table 3: Impacts of the cash transfer on household wealth

Outcome variable	(1) # of wealth assets acquired	(2) # of wealth assets acquired	(3) # of wealth assets acquired
Cash recipient	0.296*** (0.094)	0.287*** (0.106)	0.350*** (0.125)
Add # of people cared for		0.217** (0.085)	0.217** (0.086)
Requested financial help		-0.464* (0.236)	-0.478** (0.225)
Observations	607	607	471
R-squared	0.073	0.083	0.084
control sample	full	full	reduced

Robust standard errors clustered at community level in parentheses.

*** p<0.01, ** p<0.05, * p<0.1

How has the cash transfer affected households’ ability to cope with unexpected events?

We measure the **ability to cope with unexpected events** by examining whether households had to reduce their food consumption in response to an unexpected adverse event. This is a way of seeing whether households could deal with a shock by using other resources available, or whether the shock immediately triggered a situation of stress for the household.

We constructed a binary indicator which takes the value one if unexpected shocks led a household to *reduce* their food consumption and takes a value of zero if food consumption was *unaffected* by the shock. Among the 425 households in the sample who experienced some type of unexpected shock, 66% of households reported that they had to reduce food consumption as a result.

The cash transfer significantly decreased the likelihood that an adverse shock caused households to reduce food consumption

The results show that the cash transfer significantly decreased significantly the likelihood that an adverse shock caused households to reduce food consumption, by 13 percentage points on average (down from a mean of 66%), as shown in Table 4, column 1.

If we take other factors into account, such as the number of additional family members a cash recipient household cares for and whether financial support had been requested by other community members, **the effect of the cash on shock resilience becomes even larger** (the likelihood of reduced food consumption decreases by 17 percentage points for cash recipients). Column 2 of Table 4 shows that both caring for additional family members and helping other community members in need implied higher vulnerability to risk: each additional family member increases the likelihood of reducing food consumption due to a shock by 6 percentage points; and being asked for help increases the likelihood by 22 percentage points.

Finally, if we exclude from the control sample those households who reported that they had already spent some money in anticipation of the cash transfer to come, as shown in column 3, **the cash transfer has an even stronger effect on increasing resilience**: the risk of reducing food consumption after a shock decreases by 20.5 percentage points, or by 31% from the sample mean.¹⁰

Table 4: Impacts of the cash transfer on resilience to shocks

Outcome variable	(1) Shock resulted in food reduction	(2) Shock resulted in food reduction	(3) Shock resulted in food reduction
Cash recipient	-0.134*** (0.045)	-0.174*** (0.048)	-0.205*** (0.053)
Add # of people cared for		0.063* (0.032)	0.063* (0.033)
Requested financial help		0.224* (0.129)	0.224* (0.132)
Observations	401	401	299
R-squared	0.035	0.050	0.075
control sample	full	full	reduced

Robust standard errors clustered at community level in parentheses.

*** p<0.01, ** p<0.05, * p<0.1

For these regressions, we include only those households who have experienced some type of adverse shock, which reduced the sample to 401 households.

These results show that cash transfers had two important effects on the recipient households. First, the cash transfer allowed households to build up wealth. Second, the cash transfer was used as a buffer against adverse shocks and prevented unexpected adverse events such as sickness, death of family members, loss of employment or pests affecting agricultural production from translating into situations of stress, manifested in reduced food consumption.

¹⁰ All results reported here change very little in size when we add various community level variables as controls (such as presence of schools, physical infrastructure in the community and distance to health facilities).

How has the cash transfer affected household expenditure to benefit children?

As the main objective of the cash transfer was to address reduce child labour, we examine whether cash recipient households spent more money in areas we would expect to directly benefit children, notably **education** and **adult labour**, reducing the need for children's participation in farm work in favour of their school attendance. We also look at household **expenses related to the Covid pandemic**.

How did we measure expenditure to benefit children?

To assess how the cash transfer has affected spending that benefitted children, we look at the following outcomes:

- Spending on adult labour
- Spending on children's education
- Expenses related to the covid pandemic

We run regressions using the same control variables and variations as described above on p23: household size, assets, income and location.

For all these variables, it is important to keep in mind that they are based on households' estimates requested as part of the endline survey, and that such estimates are generally difficult to make, especially when referring to long recall periods such as a full agricultural cycle or a school year.

Cash recipients spent on average GHS 264 less on adult labour over the course of the year preceding the endline survey, which is a 24% reduction on the sample mean of GHS 1081, as shown in column 1 of Table 5. However, **this effect becomes statistically insignificant when we take into account the number of additional family members cared for** (column 2).

We see that taking care of additional family members now becomes a statistically significant explanatory variable for adult labour hired: the larger the number of family members cared for, the smaller the number of hired labourers. The pattern remains unchanged if we reduce the control group to those who have not spent money in anticipation of the cash (column 3). One possible interpretation is that the additional family members also help with the field work and substitute hired labour.¹¹

The analysis shows no significant effect of that cash transfer on household spending on children's education – none of the coefficients, shown in columns 4, 5 and 6 are statistically significant. As school enrolment was already very high at baseline (99%), one explanation is that there may be too little margin to detect any effect of the cash transfer on the quantitative school-related measures available in the data (including school-related expenditure).

The cash transfer enabled households to spend significantly more on items needed during to the Covid pandemic

Households who received the cash transfer spent significantly more money on average on items related to the Covid pandemic, as shown in Table 5, column 7. Households mainly reported

¹¹ As we have seen in chapter 3.2, the new household members who have joined the 35 households who now care for additional family members are mainly children aged 5-17 (44%) and adults (43%). So if the interpretation is valid, then additional family members attracted through a cash transfer may also provide labour. However, as we will see further below, on average across all households, the cash transfer has decreased rather than increased the risk that children in the household engage in hazardous farm work.

buying hand sanitizer and masks, but also to spending more on food due to inflated prices as a result of the pandemic. The increase by GHS 75 may seem a small amount in absolute terms, but corresponds to an increase of 58% on the sample mean. **This effect however becomes statistically insignificant when we add as controls the number of additional household members cared for and whether the household has been asked for financial help by community members** (column 8 with full control sample and column 9 with reduced control sample).

We also check whether the cash has affected estimated expenditure on other basic needs, including food, clothing, health care; or loan taking. We find no statistically significant effects of the cash on any of these estimated amounts, except an increase in expenditure on clothing and a decrease in spending on food in the last month, but both disappear when we reduce the control group to those who have not spent money in anticipation of the cash (detailed results available upon request).

We conclude that it is difficult to discern effects of the cash on spending on specific areas, except via a potential channel of additional labour available within the household. The increased spending directly related to the Covid pandemic (protective equipment and food at inflated prices) confirms the effect we have seen in the previous chapter, that the cash transfer has made increased households' ability to respond to unexpected events.

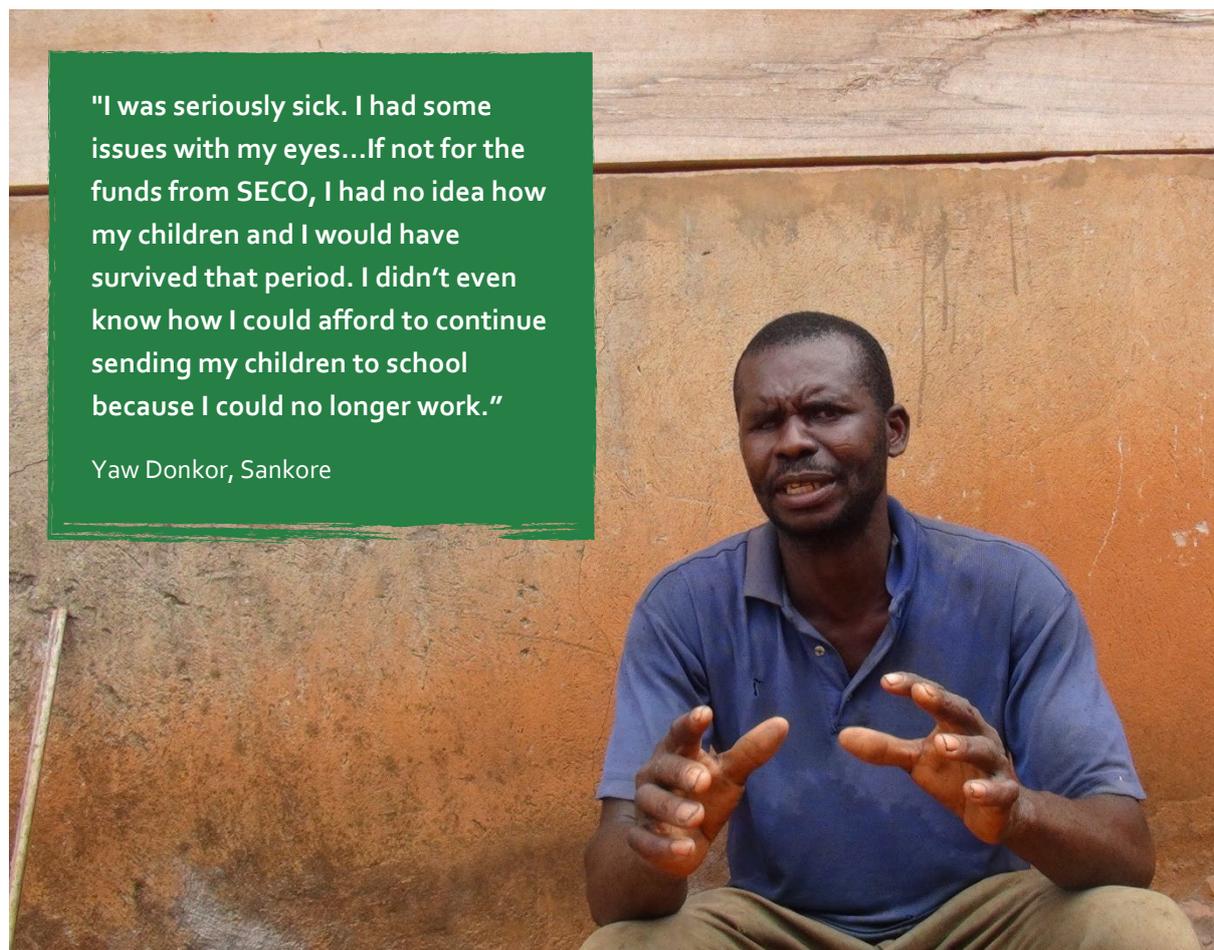


Table 5: Effects of the cash transfer on household spending on labour, education and Covid

Variables	(1) Amount spent on labour (GHS)	(2) Amount spent on labour (GHS)	(3) Amount spent on labour (GHS)	(4) Amount spent on education / child (GHS)	(5) Amount spent on education / child (GHS)	(6) Amount spent on education / child (GHS)	(7) Covid related spending (GHS)	(8) Covid related spending (GHS)	(9) Covid related spending (GHS)
Cash recipient	-264.393** (123.598)	-203.722 (137.961)	-125.877 (150.164)	-32.182 (36.906)	-31.535 (39.813)	-56.772 (47.270)	75.409** (30.048)	56.967 (35.266)	43.042 (37.418)
Add # of people cared for		-142.007** (56.973)	-126.915** (54.384)		13.341 (21.474)	14.312 (21.226)		62.432 (58.732)	62.538 (60.108)
Requested financial help		-179.449 (172.795)	-192.126 (162.410)		-39.077 (42.131)	-40.667 (41.088)		6.451 (111.401)	8.198 (113.945)
Observations	607	607	471	607	607	471	606	606	471
R-squared	0.061	0.064	0.049	0.023	0.024	0.019	0.018	0.025	0.023
control sample	full	full	reduced	full	full	reduced	full	full	reduced

Robust standard errors clustered at community level in parentheses.

*** p<0.01, ** p<0.05, * p<0.1

Effects of the cash transfer on children

In this section we look at the impacts of the cash transfer on children's engagement in child labour, children's material wellbeing and shocks.

How did we measure effects of the cash transfer on children?

To examine effects of the cash transfer on children, we use the sample of 1,173 children aged 5 to 17 years who participated in the endline survey. We merge to the child interviews baseline and endline information on the households in which the children live.

We use multiple regression analysis, with a binary **indicator for whether the child lived in a household having received a cash transfer** as the main **explanatory variable**.

First, we test which child and household characteristics are the most powerful predictors for children's engagement in hazardous work – our main child outcome of interest – at baseline. In order to see the effect of the cash more clearly, we then control for these factors, meaning we separate out the effects of important baseline differences between children and households.

When we analyse the effects of the cash transfer, we control for the following predictors,

- **Sex:** the child's sex and indicator variables for the child's age group¹²
- **Household type:** whether the household is caretaker or farm owner
- **Farm size:** the size of cocoa farms cultivated by the household at baseline (in acres)
- **Location:** an indicator variable for the region

How did the cash transfer affect hazardous child labour?

To see whether the cash transfer has helped reduce child labour, we look at two measures:

- **Hazardous child labour:** a binary indicator of whether the child has done any hazardous child labour
- **The number of hazardous tasks,** as a proxy measure of the severity of hazardous child labour.¹³

For both indicators, we use 6-month reference period to cover the period when child labour risk is highest (during the main harvest between October and January, and during school holidays in December; see chapter 2), and thereby capture a more complete picture of the incidence of hazardous child labour.

¹² Note that even though we have no baseline information on child characteristics, these particular demographic variables are unaffected by the treatment and can therefore be used as controls.

¹³ Bearing in mind the long recall period of 6 months, we consider this measure more reliable than possible alternative measures related to how long and on which days children have been working. Details on the latter have been collected for a one-week reference period, however for the reasons explained, we prefer to use a six month reference period.

The cash transfer significantly reduced hazardous child labour, but we see no change in the number of hazardous tasks

We see that the **cash transfer has reduced the prevalence of hazardous child labour** by 6.8 percentage points in our simplest regression model (Table 6, column 1). When we account for other factors – the number of additional family members cared for, and financial support requested by other community members – the impact of the cash transfer remains at a similar magnitude but is no longer statistically significant. However, if we now exclude from the control sample children living in households who have spent some money in anticipation of the cash (which is the most conservative and therefore our preferred model; column 3), **the impact of the cash transfer comes through even more clearly and is also larger in magnitude**, with a 9.3 percentage points decrease due to the cash transfer. This corresponds to a 16% reduction on the sample mean of 58% of hazardous child labour prevalence at endline.

We cannot discern any effect of the cash transfer on the number of hazardous tasks the child has done over the last 6 months (columns 4-6). The estimated coefficients are negative in all 3 versions of the model. This would indicate a reduction in the number of tasks due to the cash transfer, and standard errors are not very large, but still too large to be statistically significant.

We also see from Table 6 that the coefficients on child characteristics also indicate that child labour prevalence and severity follow the well-established patterns: boys and older children are significantly more likely to engage in hazardous activities and to do more different hazardous tasks.

“I gave part of the money I received as allowances to my children when they were going to school and to also cover educational expenses like buying of books and pens. I didn't have much problem taking care of my children in school within the period, despite the fact that we were in the lean season.”

Emmaneul Obeng, Suhum



Table 6: Cash transfer effects on hazardous child labour

Outcome variables	(1)	(2)	(3)	(4)	(5)	(6)
	Child engaged in hazardous child labour (last 6 months)			Number of hazardous tasks child has done (last 6 months)		
Cash recipient	-0.068*	-0.060	-0.093**	-0.155	-0.061	-0.198
	(0.037)	(0.040)	(0.044)	(0.139)	(0.151)	(0.168)
Boy	0.121***	0.120***	0.106***	0.481***	0.483***	0.515***
	(0.028)	(0.028)	(0.031)	(0.102)	(0.102)	(0.113)
Age group 12-14 years	0.159***	0.158***	0.159***	0.722***	0.714***	0.670***
	(0.032)	(0.032)	(0.036)	(0.124)	(0.124)	(0.138)
Age group 15-17 years	0.253***	0.251***	0.269***	1.129***	1.125***	1.245***
	(0.033)	(0.033)	(0.036)	(0.139)	(0.138)	(0.156)
Add # of people cared for		-0.022	-0.023		-0.078	-0.076
		(0.030)	(0.031)		(0.091)	(0.092)
Requested financial help		-0.002	-0.005		-0.491**	-0.505**
		(0.077)	(0.077)		(0.222)	(0.221)
Observations	1,173	1,173	923	1,173	1,173	923
R-squared	0.077	0.078	0.088	0.108	0.112	0.134
control sample	full	full	reduced	full	full	reduced

Additional controls included in all regressions, coefficients not shown in table: whether farmer is caretaker or farm owner; cocoa farm size at baseline; region.

Robust standard errors clustered at household level in parentheses.

*** p<0.01, ** p<0.05, * p<0.1

Did the cash transfer affect children's material wellbeing?

We look at the effects of the cash transfer on children's material wellbeing to understand if the cash transfer has allowed households to provide essential items for children, such as clothes, shoes, a blanket and mattress.

How did we measure children's material wellbeing?

To examine whether the cash has allowed households to spend more money on children's material wellbeing, we asked children in the endline survey whether they have their own blanket, a bed and mattress, a pair of shoes, and two sets of clothes.

We summarize the child's ownership of these 3 items in a linear index, denoted a child's "basic material needs" index, ranging from 0 to 1.¹⁴ As shown in Table 7, only few children in the sample own none, one or two items; while 80% of children own all 4 items. Unfortunately, we cannot check how this index has evolved overall since the baseline data collection, since these items were included only in the endline survey.

Table 7: Distribution of children's basic material needs index

Basic material needs index	# of children	Share of children
0	18	2%
.25	12	1%
.5	46	4%
.75	162	14%
1	947	80%
Total	1185	100%

The results show that the cash transfer has been invested in children's material wellbeing, even though the overall ownership of these four basic items was already high at baseline.

The cash transfer results in a rise on the index by 0.032 if we use the simplest regression model (see Table 8, column 1). When we account for the number of additional family members cared for, and financial support requested by other community members, the cash transfer raises the index by 0.45 (column 2). We can also see that caring for additional family members is correlated with lower material wellbeing of the individual child, as we would expect. If we now exclude from the control sample children living in households who have spent some money in anticipation of the cash transfer (column 3), the cash increases the index by 0.045. The absolute average improvement in basic material needs may seem small in magnitude, but it is highly statistically significant.

The cash transfer was invested in children's material wellbeing

¹⁴ The child's material wellbeing index takes value 0 if the child owns none of these items; 0.25 if the child owns one out of the 4 items; and so forth; and value 1 if the child owns all 4 items.

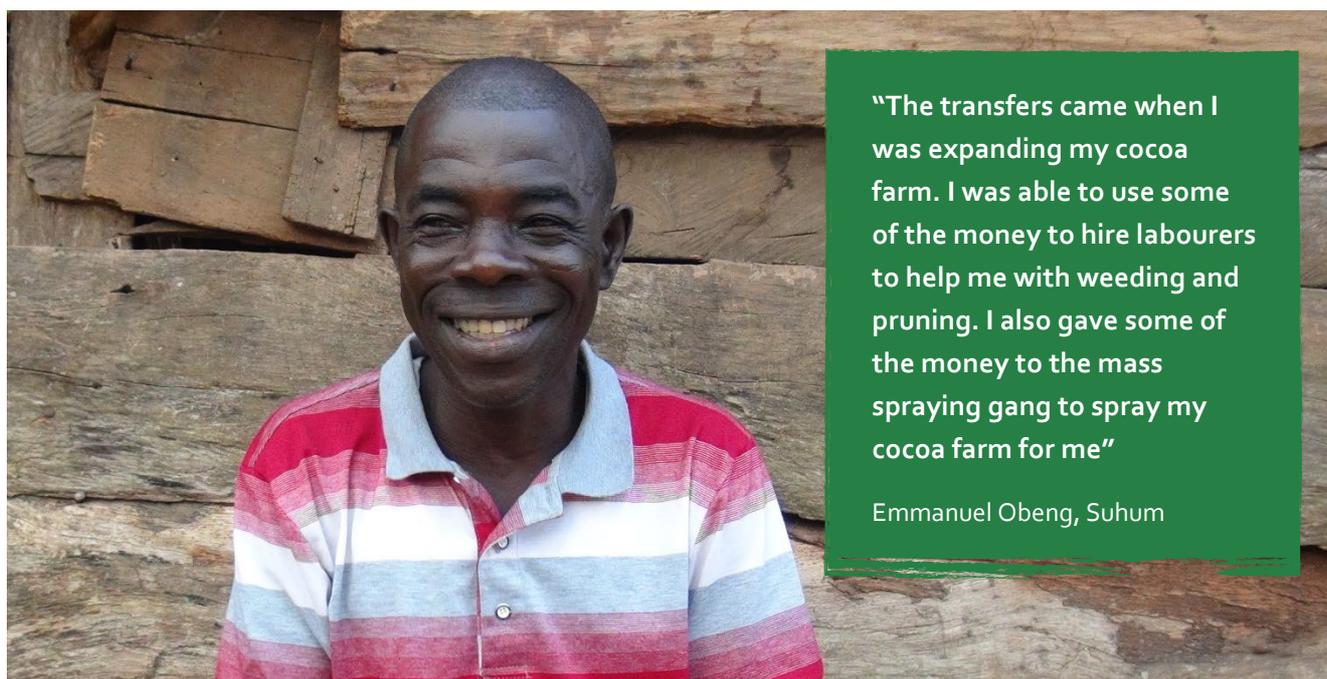
We conclude that households have used the cash to better meet children's basic material needs. An index with more individual items would have been needed to see more nuance between the 80% of children who own all 4 of the basic items included here.

Table 8: Effect of the cash transfer on children's material wellbeing

Outcome variable	(1)	(2)	(3)
	Child's basic material needs index		
Cash recipient	0.032** (0.014)	0.043*** (0.014)	0.045*** (0.017)
Boy	-0.013 (0.011)	-0.014 (0.011)	-0.022* (0.012)
Age group 12-14 years	0.002 (0.012)	0.001 (0.012)	0.007 (0.013)
Age group 15-17 years	-0.013 (0.015)	-0.015 (0.015)	-0.008 (0.017)
Add # of people cared for		-0.021** (0.010)	-0.021** (0.010)
Requested financial help		-0.022 (0.026)	-0.024 (0.026)
Observations	1,173	1,173	923
R-squared	0.014	0.020	0.022
control sample	full	full	reduced

Additional controls included in all regressions, coefficients not shown in table: whether farmer is caretaker or farm owner; cocoa farm size at baseline; region.

Robust standard errors clustered at household level in parentheses. *** p<0.01, ** p<0.05, * p<0.1



Did the cash transfer protect children from adverse shocks?

As we have seen, the cash transfer allowed households to be more resilient against adverse shocks. We now examine whether this increased resilience also translates into benefits for children living in these households.

How did we measure if household resilience benefits children?

To measure this, we re-run the regressions on child outcomes presented in the previous sections, but now use interaction terms between receiving the cash transfer and having experienced an adverse shock as the explanatory variables. These interaction term “cash # shock” takes the value one for cash recipient households if they have experienced an adverse shock; and zero for all other households. The interaction term “control # shock” takes the value one for control households if they have experienced an adverse shock; and zero for all other households.

We re-run our preferred version of the regression model, which accounts for additional family members cared for and financial support requested by other community members; and excludes from the control sample children living in households who have spent some money in anticipation of the cash transfer. As outcome indicators, we use the child labour measures as in the previous section, and the index of a child’s basic material needs.

The results clearly show that the cash transfer acts as a buffer against harm to children from adverse shocks experienced by the household, as shown in Table 9.

In column 1 of Table 9, we see that in cash recipient households, children’s engagement in hazardous child labour was not at all affected by the experience of an adverse shock; conversely, in control households children’s engagement in hazardous child labour increased by 10 percentage points, which corresponds to an 18% increase on the sample mean (and this increase was statistically significant). Similarly, adverse shocks did not result in any statistically significant increase in the number of hazardous tasks done by children in cash

recipient households; but in control households resulted in a statistically significant increase by 0.424, which corresponds to a 28% increase on the sample mean (Table 9, column 2).

On the other hand, column 3 shows that a positive effect of the cash transfer on children's material wellbeing is felt in cash recipient households *in spite of* an adverse shock (albeit smaller in size than on average across the sample). Amongst control households, an adverse shock has no discernible effect on children's material wellbeing – the coefficient has a negative sign, as expected, but is not statistically significant.

The cash transfer protects children from adverse events experienced by the household and helps prevent households from resorting to child labour in the face of unexpected negative events.

Table 9: Effect of the cash transfer on children in the event of adverse shocks.

Outcome variable	(1) Child engaged in hazardous child labour (last 6 months)	(2) Number of hazardous tasks child has done (last 6 months)	(3) Child's basic material needs index
cash # shock	-0.006 (0.050)	0.198 (0.187)	0.031* (0.017)
control # shock	0.103** (0.052)	0.424** (0.193)	-0.027 (0.024)
Boy	0.104*** (0.031)	0.513*** (0.112)	-0.021* (0.012)
Age group 12-14 years	0.163*** (0.036)	0.691*** (0.138)	0.007 (0.013)
Age group 15-17 years	0.274*** (0.036)	1.269*** (0.157)	-0.009 (0.017)
Add # of people cared for	-0.026 (0.031)	-0.092 (0.091)	-0.022** (0.010)
Requested financial help	-0.014 (0.075)	-0.507** (0.211)	-0.018 (0.026)
Observations	923	923	923
R-squared	0.089	0.140	0.025
control sample	reduced	reduced	reduced

Additional controls included in all regressions, coefficients not shown in table: whether farmer is caretaker or farm owner; cocoa farm size at baseline; region.

Robust standard errors clustered at household level in parentheses. *** p<0.01, ** p<0.05, * p<0.1

6

Conclusions

The cash transfer experiment has shown that an unconditional cash transfer paid to cocoa farmers in Ghana is effective in reducing child labour and increasing household resilience.

The cash was paid as mobile money in monthly instalments over a period of six months. Even though approximately 7% of the recipient households had to be provided with mobile phones by project funds, the **mobile money channel proved to be an efficient and reliable way of transferring cash to cocoa farmers** in Ghana. Only about 6% of households faced challenges in receiving the money, mostly related to blocked sim cards or mobile money accounts, lack of knowledge about how to operate mobile money, or because intermediary recipients were absent from the household.

Control over the use of the cash transfer remained largely in the hands of the individual receiving it. The design of the project meant that cash transfer recipients were registered farmers, who were mostly male. A more gender equitable approach should include cash transfers to women.

Some of the cash trickled through to a wider group of beneficiaries, beyond those for whom it was initially intended: 13% of cash recipient households were asked to care for additional family members since they started receiving the cash transfer, and 12% of the recipient households had occasionally been asked for help from community members in financial need.

At the household level, the cash transfer has allowed households to build up wealth, as measured in assets acquired during the cash payment period; **and has made households more resilient to adverse shocks** such as health or income shocks. Such shocks were experienced by around two thirds of the households in the sample; but were much less likely to translate into situations of stress if the household received a cash transfer.

The cash transfer helped to reduce the prevalence of hazardous child labour. According to our preferred regression model, the cash transfer has reduced child labour prevalence by 9.3 percentage points (on an overall prevalence of hazardous child labour of 58% when using a 6-month recall period), or in relative terms, a 16% reduction. We cannot see an effect on the severity of child labour, however, when measured in the number of hazardous tasks done by children. **Children benefitted in other ways too:** their **material wellbeing** improved, as measured by basic material needs items owned personally by a child and the cash

transfer **protected children against adverse events experienced by the household**; and prevented households from using child labour to cope with unexpected negative events.

We conclude that unconditional cash transfers paid to farmers in Ghana can be an effective component of a strategy to prevent and address hazardous child labour in cocoa growing areas.

These results show that **cash transfers can protect households and children against adverse shocks in this context** and are highly relevant in the face of increased risk of health shocks, income fluctuations or loss of agricultural production due to weather or pests.

The findings of this study are consistent with a broader body of evidence showing that cash transfers lead to positive outcomes for households and children, including lower rates of child labour and increased child wellbeing. Some cash transfer studies from other contexts also revealed that under some circumstances, cash transfers can lead to children's *increased* participation in work, notably if the money is used to set up new business activities which require additional labour. The design of this pilot cash transfer appears to have helped avoid such adverse effects.

The effects measured in this experiment so far are short term effects. It remains to be seen which of these effects can be sustained beyond the period of the cash transfer, and whether longer-term cash payments would result in stronger or different effects remains to be examined.

Overall, while the reduction in hazardous child labour achieved here is promising, the prevalence of child labour at endline remains relatively high, at around 50%, suggesting that cash transfers alone cannot solve the issue and should be embedded in larger strategies to address the use of child labour in cocoa production.



Appendix

Summary statistics

Table 10: Summary statistics of key household variables at baseline and endline

	Baseline mean	Endline mean
Household members	6,5	6,4
Children age 5-17 in household	2,6	2,5
Non-biological children in household	0,8	0,7
Cocoa land size (acres)	8,7	9,2
Bags of cocoa produced past 12 months	20,1	13,8
Total annual income (GHS)	9700	9131
Total expenditure past month (GHS)	1130	1698
Amount spent on labour last 12 months (GHS)	699	1080
Amount spent on education / child (5-17), past month (GHS)	117	209
Amount spent on food / hh member, past month (GHS)	96	103
Amount spent on health / hh member, past month (GHS)	32	47
Value of outstanding loans (GHS)	827	882

Table 11: Summary statistics of child variables in the endline data

	<i>n</i>		min	max
Share of children participating in hazardous child Labour (last 6 months)	1,185	58%		
# of hazardous tasks child has done (last 6 months)	1,185	1.53	0	11
Index of basic material needs	1,185	0.92	0	1
Share of boys	1,185	51%		
Child's age	1,185	11,6	5	17
Share of children enrolled in school	1,185	98,7%		