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ABSTRACT

Cash transfers and business survival during Covid: Evidence from Uganda*

The Covid-19 pandemic and the lockdown policies that followed led to a sharp economic downturn. Many countries used cash transfers to curb the negative effects on vulnerable households but little is known about the effects of such transfers in a time of crisis, when markets are closed and movements are restricted. In this paper, we study the impacts of cash transfers to households in Uganda. Leveraging differences in the timing of the intervention, we show that the temporary cash transfers improved business outcomes during the pandemic and had persistent, positive effects on household income, savings and food security.

JEL Classification:
H25, I38, O12

Keywords:
cash transfers, COVID-19, Uganda, business outcomes, savings, food security

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1. Introduction

Cash transfers are a widely used policy tool to assist poor households and was the most common social protection policy during the Covid-19 pandemic.[1] But how effective are cash transfers in a time of crisis, when markets are closed and movements restricted as was the case in most countries during the pandemic? And what are the long-term effects of such temporary support?

We address these questions using evidence from a cash intervention supporting households in Uganda during Covid. Using a difference-in-difference estimator, we find that the intervention, which targeted female household heads and was framed as business support, led to marked improvements in business revenues, household income, savings and food security. Importantly, these temporary measures also carried longer-term benefits for the households and their businesses. Quantitatively, the impact of cash transfers is large: It amounts to a 45 percent increase in household income and a 50 percent increase in their savings two years after the start of the pandemic and one year after the cash transfers.

Our paper relates most closely to the small, but growing literature on the effectiveness of cash transfers during the Covid-19 pandemic. Stein et al. (2022) show that an unconditional cash program improved food security among refugees in Uganda. Brooks et al. (2022) analyze the short-term effects of a one-time cash grant to female micro-enterprise owners in Kenya and find large and positive effects on profits and food spending. Karlan et al. (2022) analyze the effect of cash transfers among low-income households in Ghana, showing positive effects on income and food security Aggarwal et al. (2020) show that cash transfers through the Give Directly program increased food security in Malawi. Banerjee et al. (2020) find that a universal basic income program in Kenya reduced hunger but did not increase business income in the early phase of the lockdown period. Hangoma et al. (2024) use panel data from nine low- and middle-income countries and document an increase in food insecurity from the pandemic and lockdown measures and a positive effect of economic support measures.

[1] See, for example, Bastagli et al. (2019); **?**); Haushofer and Shapiro (2016, 2018); Haushofer et al. (2019, 2020); Hidrobo et al. (2014); Macours et al. (2012); Paxson and Schady (2010); Bailey and Harvey (2017); Gentilini et al. (2020); Hale et al. (2021); Kirti et al. (2022).

We contribute to this literature by evaluating the impact of cash transfers over a longer period of time, tracking households for two years after the onset of the pandemic and more than a year after the final transfer. The long-term data collection allows us to address whether a time-limited intervention can have lasting impacts or whether the effects dissipate as soon as the transfers are discontinued. These are clearly highly relevant questions from a policy perspective.

Our study also relates to the literature on the economic impacts of Covid-19. The evidence suggests that the initial phase of the pandemic was associated with a sharp reduction in income and food security in a number of countries.[2] Some studies, including the evidence presented here, show that Uganda is no exception. Khamis et al. (2021) find that 20 percent of the respondents stopped working during the pandemic, while 13 percent changed their work. Mahmud and Riley (2021) survey households in rural areas right before and seven to eight weeks into the lockdown and document a sharp reduction in household income and food consumption, by 60 and 50 percent, respectively, a reduction in reported quality of life, and an increase in perceived intimate partner violence. Tracking the same households every month for one year after the lockdown, Mahmud and Riley (2023) document a rather quick recovery among households that did not have a business prior to the pandemic, while business owners experienced an enduring reduction in income and wealth. Kansiime et al. (2021) show that food security and incomes fell during the pandemic in both Kenya and Uganda. **?** analyze the impact of the lockdown on employment among skilled workers and find a particularly large reduction in women's employment, at least partly explained by the prolonged school closures. We contribute by presenting evidence on the effects of cash transfers on business survival in Uganda during and after the Covid-19 pandemic.

The remainder of the paper is organized as follows. Section 2 describes the sample and the data used, and offers a description of the policy context and income trends among the households in our study areas; Section 3 presents the empirical specification for identifying the impact of the cash transfers; Section 4 presents the results on income, savings and food security; Section 5 concludes.

[2]Dupas et al. (2023); Bundervoet et al. (2022); Hammond et al. (2022); Miguel and Mobarak (2022); Davis (2021); Egger et al. (2021)

2. Data

2.1. Sample and surveys

The households in our sample were part of a study on subsidized childcare and cash grants, covering 389 communities in three regions of Uganda (see Bjorvatn et al., 2025). We intended to offer two years of support to households with a child who was three or four years old at baseline, and one year of support to households with a five-year-old, as this older child would enter free primary education during the second year. The pandemic led to school closures, which limited the childcare intervention to one year. In contrast, the cash intervention was implemented as planned: Households with a three or four-year-old child received cash grants in years 1 and 2, while households with a five-year-old child received cash in year 1 only. We exploit this variation in the treatment to identify the causal effect of receiving cash transfers during the pandemic.

The cash transfers were unconditional but labeled as business grants, to support existing businesses or create new ones, and transferred directly to the female main caregiver. This labeling was motivated by the fact that the labor market in Uganda is highly gender-segmented, with women typically running small businesses and men being more likely to be wage-employed. The transfers were paid in the spring, summer, and fall (roughly coinciding with the beginning of the school terms). Households in the cash-support group received an average yearly transfer of around UGX 424 thousand (114 USD), about 12 percent of the average yearly household income before the pandemic broke out.

Table 1 shows the timeline of our study. We distinguish between three different periods: Period 1 before the outbreak of Covid-19; Period 2 during the most intense lockdown (March until December 2020); and Period 3 after most of the measures were lifted (2021 and 2022). There are eight surveys in total: three in Period 1 (S1-S3); three in Period 2 (S4-S6); and two in Period 3 (S7 and S8). The respondent in all surveys was the female head of the household, who in most cases was the mother of the target child but in some cases the grandmother.

Note that we do not have all outcome variables available for all surveys, which explains

the difference in sample size across outcome variables. For the pre-Covid surveys, we used face-to-face interviews. During the lockdown (the first year of the pandemic), we resorted to phone surveys. In the second year of the pandemic, we did face-to-face interviews again, following the official guidelines (e.g. about the use of masks and safe distancing).

Table 1: Periods and surveys.

Survey details				Variables		
Period	Survey	Time of survey	Format	INC	SAV	FS
Period 1	S1	November 2018	Physical	✓	✓	
	S2	July 2019	Physical	✓		
	S3	February 2020	Physical	✓	✓	✓
Period 2	S4	April 2020	Phone	✓	✓	✓
	S5	July 2020	Phone	✓	✓	✓
	S6	December 2020	Physical	✓	✓	✓
Period 3	S7	February 2021	Physical	✓	✓	
	S8	February 2022	Physical	✓	✓	✓

Notes: INC = Income, SAV = Savings, FS = Food security.

When we restrict the sample to households that participated in all eight rounds of data collection, our sample consists of 531 cash recipients observed at eight points in time.[3]

2.2. The lockdown and economic trends

Uganda's response to the pandemic was rapid and comprehensive (Hale et al., 2021). In March 2020, the government implemented a series of lockdown measures, including a prohibition of mass gatherings, closure of schools and universities, banning of public and private transportation, the implementation of a curfew, and the closure of most businesses. The policies were gradually lifted from May 2020 onwards, starting with hardware shops, insurance companies and takeaway restaurants. Most businesses were allowed to resume their work by the end of July, but public gatherings with more than five people and international travel remained prohibited until early October. The most

[3]Some households in this sample also received free childcare during 2019. These households correspond to the "combined" treatment in Bjorvatn et al. (2025) and do not differ in their economic trajectories prior to the lockdown. There is six percent attrition in Period 2 and seven percent attrition in Period 3, but this is balanced across groups (see Appendix Table C1).

restrictive constraints applied to schools and preschools, which remained closed until the end of 2021.

How did these policies affect the livelihoods of households in our study areas? To answer this question, we show income trends for 373 households that did not receive any assistance from us, neither in the form of childcare support nor cash.[4] Figure 1 shows the patterns before, during, and after the pandemic for total household income as well as by occupation. The grey shading indicates the period with the most intense lockdown measures (April to December 2020).

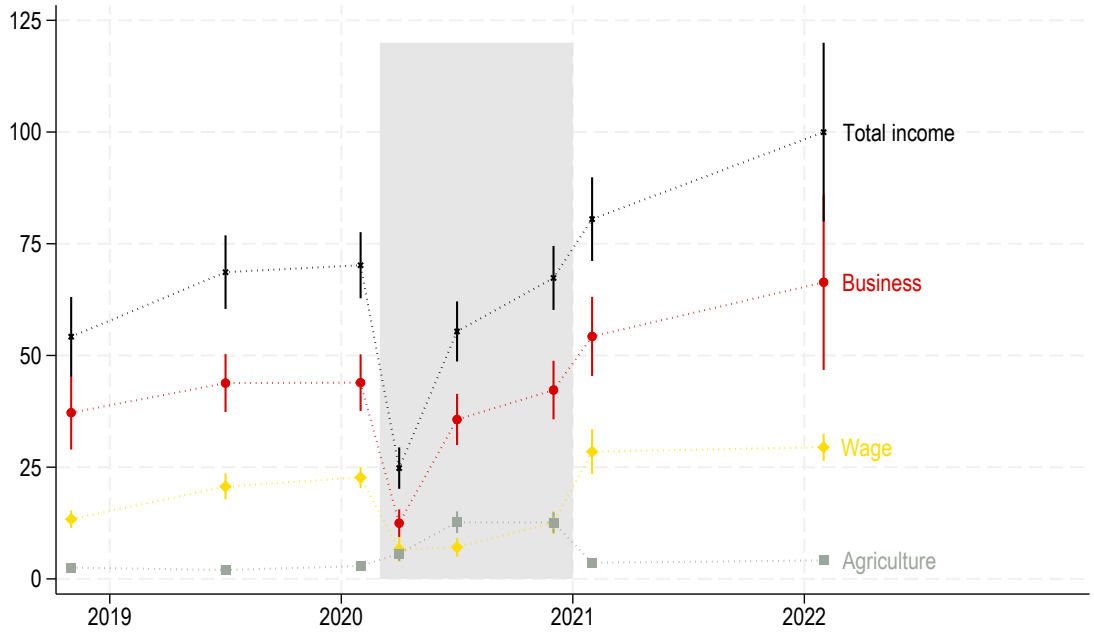
We observe that total household income dropped sharply during the early phase of the lockdown, from UGX 70 thousand right before the pandemic to UGX 25 thousand in the first survey during the pandemic, a 65 percent drop. This is comparable to the 60 percent drop reported in Mahmud and Riley (2021). The most important source of income, self-employment, fell to about one-fourth of its 2019 level. Income from wage labor fell radically as well, while income from agriculture (the sale of livestock and crops) increased, surpassing wage income in importance in the middle of 2020. The figure also points to a rapid recovery of the households' economy: The income from self-employment and wage labor reached the levels of 2019 towards the end of 2020, and the income from sales recovered to pre-Covid levels by early 2021.

During the first phone survey at the start of the pandemic, the respondents expressed a deterioration in their economic situation. Appendix Table C2 shows their main concerns were lacking money to buy food, school closures, the risk of employment loss, and health risks. The survey also shows that only two respondents had received government support, while 15 percent of the households had received gifts or loans from their social network in the past 30 days.

It is against this backdrop of a sharp economic downturn that we now turn to our analysis of the effectiveness of cash grants.

[4]This is the control group in Bjorvatn et al. (2025).

Figure 1: Evolution of income in the control group before, during and after the pandemic.



Note: The figure shows the evolution over time of the mean weekly household income from ● self-employment, ◆ wage labor, ■ agriculture (sale of livestock and crops), and ✕ the total of these categories (in UGX 1,000, winsorized at the top 99^{th} percentile). The grey area indicates the lockdown period. The spikes correspond to a one standard error interval around the means.

3. Empirical specification

We identify the impact of cash transfers during the pandemic, by using a difference-in-difference estimator (DD) that exploits quasi-random variation in the duration of the treatment, comparing those who received cash in both Period 1 and Period 2 (the *Cash 2* group), to those who only received cash in Period 1 (the *Cash 1* group).

Table 2 provides a balance test for the two cash-receiving groups. It shows that the baseline variables are balanced across Cash 1 and Cash 2 households, except for the age of the target child (by construction) and household size (one more household member in the Cash 1 group). Other than these two indicators, key observable characteristics of the respondents and their households are similar. The respondents' average age is 34, and 72 percent are married or have a partner. The average household consists of five to six members. The participants are more or less equally divided between those who have not completed primary education, those who completed primary education, and those who completed secondary education as their highest educational degree. Only

seven percent have education beyond secondary school. The most common income source at the household level pre-Covid is self-employment, with 74 percent of the households in the *Cash 1* and 83 percent in *Cash 2* group having their own business. Common types of self-employment include running a restaurant, selling vegetables, operating a retail shop, tailoring, collecting firewood, offering transportation services and working as a maid. Around 60 percent of households have at least one adult member who is engaged in wage labor, and 40 percent of households derive some income from agriculture (livestock and farming), reflecting the peri-urban context of our study. While most households with a business employ at least one other household member in it (73 percent), only few households employ paid workers (14 percent).

To build the DD estimator, we start from the Cash 2 group, which is the only group that received transfers during the pandemic. The first difference is in the value of their outcomes before versus during/after the pandemic. The second difference comes from the comparison between the Cash 2 and Cash 1 groups, that is, those who continued receiving cash during the pandemic versus those who received support before the pandemic only.

This double difference provides a valid estimator if the trends in outcomes are parallel by cohort. In Appendix A, we show that the pre-trends are parallel for the main outcome variables. To rely on weaker assumptions (allowing for different trends by birth cohort) and assess the robustness of our results, we also use a third difference: The DD in the cash group versus the DD in the control group. The triple difference estimates are consistent with the DD estimates though generally less precise. We present these results in Appendix A.2.

In the main specification, we pool the data and use Period 1 as the omitted category and estimate:

$$Y_{i,t} = \alpha_0 + \alpha_1(Cash2_i \times Period_2) + \alpha_2(Cash2_i \times Period_3) + H_i + T_t + \epsilon_{i,t} \qquad (1)$$

where $Y_{i,t}$ is the value of the outcome for household i in period t; $Period_2$ ($Period_3$) is equal to one if the observation is collected during (after) the pandemic; $Cash2_i$ is equal to one if the household is in the Cash 2 group and zero otherwise. H_i are household fixed

Table 2: Summary statistics, cash sample

	Mean Cash 2 (1)	Mean Cash 1 (2)	Difference (3)	Obs. (4)
Panel A: Respondent				
Age	33.84	34.24	-0.40	531
	(9.93)	(9.07)	(1.08)	
Married or partner	0.71	0.78	-0.07	531
	(0.45)	(0.42)	(0.05)	
Education				
Below primary	0.28	0.28	0.00	531
	(0.45)	(0.45)	(0.05)	
Primary	0.30	0.29	0.01	531
	(0.46)	(0.46)	(0.05)	
Secondary	0.36	0.37	-0.01	531
	(0.48)	(0.49)	(0.06)	
Above secondary	0.06	0.06	0.00	531
	(0.24)	(0.24)	(0.03)	
Panel B: Household				
Household size	5.13	6.30	-1.17	531
	(1.95)	(1.94)	(0.23)***	
Child's age	3.45	5.14	-1.69	531
	(0.55)	(0.35)	(0.05)***	
Any income				
Business	0.74	0.83	-0.08	531
	(0.44)	(0.38)	(0.05)*	
Wage	0.65	0.57	0.08	531
	(0.48)	(0.50)	(0.06)	
Agriculture	0.38	0.40	-0.02	531
	(0.49)	(0.49)	(0.06)	

Notes: Columns 1-2 give the mean and the standard deviation in the *cash 2* and the *cash 1* group, respectively. Column 3 reports the average differences between the groups. The differences are obtained by regressing each variable on the treatment indicator. Statistical significance is indicated by $\star$ $p < 0.1$, $\star\star$ $p < 0.05$, $\star\star\star$ $p < 0.01$.

effects, T_t are time fixed effects and $\epsilon_{i,t}$ is the error term.

Appendix A.1 shows the survey-wave-specific effects. We account for multiple hypotheses testing following the procedure developed by Benjamini et al. (2006). We group outcomes by period and category (income, savings, food security) and correct the p-values within these families.

The key variables, α_1 and α_2, estimate the effect of cash transfers in Period 2 and Period 3. Throughout the paper, monetary values are expressed in 1,000 Ugandan shillings (UGX) and are winsorized at the 99^{th} percentile. Standard errors are clustered at the household level.

4. Results

Table 3 shows the impact of cash support on household income.[5] To put the magnitude of the effects into perspective, we provide the average of the outcome for the Cash 1 group, i.e. households that only received cash before the onset of the pandemic. We start by reporting results on the extensive margin (Panel A), before moving to the intensive margin (Panel B).

Column 2 in Panel A shows that the cash transfers increase the likelihood of receiving income from self-employment in period 2, mitigating the downturn that the Cash 1 group experiences. Among the Cash 1 group, percentage of households that receive any income from household businesses decreases from 68% in Period 1 to 54% in Period 2. Relative to this downturn, households in that received cash during Period 2 were 13 percentage points more likely to have business income in Period 2. While the effect remains similar in magnitude in Period 3, corresponding to a 10 ppt increase, this is not robust to multiple hypothesis testing.

[5]The income measures do not include cash transfers, as those were given outside the time frame of the relevant survey questions. For the in-person surveys, the time frame was the preceding month, and for the phone surveys the preceding week. We re-scaled the monthly measures to weekly ones, as to make them comparable throughout.

Table 3: Household income

	Total	Business	Wage	Agriculture
	(1)	(2)	(3)	(4)
Panel A: Extensive margin				
Cash 2 x Period 2	.02	$.13^{***}_{\star\star\star}$	-.05	.03
	(.04)	(.04)	(.05)	(.03)
Cash 2 x Period 3	.04	$.1^{**}$	.05	0
	(.04)	(.04)	(.06)	(.04)
Obs.	4121	4109	4207	4225
Mean Cash 1				
Period 1	.89	.68	.4	.19
Period 2	.69	.54	.13	.13
Period 3	.91	.62	.43	.26
Panel B: Intensive margin				
Cash 2 x Period 2	13.63	16.4^{**}	-5.03	1.35
	(9.5)	(8.23)	(3.41)	(1.49)
Cash 2 x Period 3	$23.5^{**}_{\star\star}$	$20.64^{**}_{\star\star}$	1.52	-.26
	(10.18)	(9.05)	(3.22)	(.38)
Obs.	3967	4109	4112	4205
Mean Cash 1				
Period 1	90.77	73.36	12.76	.81
Period 2	45.1	31.41	7.94	5.21
Period 3	86.09	61.83	21.91	1.74

Notes: The dependent variables measure weekly household incomes at the extensive (Panel A) and intensive margin (Panel B). Incomes are in thousands of UGX and are winsorized at the top 99^{th} percentile. Standard errors are clustered at the household level. Statistical significance is indicated by $* \ p < 0.1$, $** \ p < 0.05$, $*** \ p < 0.01$ for unadjusted p-values and by $\star \ p < 0.1$, $\star\star \ p < 0.05$, $\star\star\star \ p < 0.01$ for p-values that are adjusted for multiple hypotheses testing.

Turning to the intensive margin, we observe that the cash transfer led to an increase in total household income, an effect that is statistically significant in Period 3. The treatment effect is driven by an increase in income from self-employment, with quantitatively large impacts in both periods (a 52 percent increase in Period 2 and a 33 percent increase in Period 3, compared to the Cash 1 group).[6]

In the post-pandemic surveys, we asked the households whether they closed a business

[6]We measure income from self-employment as revenues since we did not ask for profits during period 2 (S-4 to S-6). We get consistent results for period 3 when we use profits from self-employment rather than revenues.

in the past 12 months and why they did so. We find that 29 percent of the households in the Cash 1 group closed a business during Covid, with lack of funds reported as the main reason, while only half as many households in the Cash 2 group closed a business in the same time period (Table C3). The increased business survival harmonizes well with the fact that around one third of the households state that they invested most of the cash support into their businesses (Figure C2). It also aligns with the positive impact on income from self-employment.

The improved financial position of the households can also be seen in Table 4, which shows that the cash grant protected households from a drop in savings. During the pandemic, their average total stock of savings is UGX 53 thousand (53 percent) higher than the Cash 1 average. This improvement is driven by savings held in saving groups ("Groups"), which is the main source of savings (as can be seen from the Cash 1 average).[7] The positive effect on savings is persistent: in Period 3, households in the Cash 2 group have on average 51 percent higher savings than those in the Cash 1 group.

Table 4: Household savings and food security

	Savings					Food security	
	Total	Groups	Bank	Mobile	Cash	Meals	Food
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Cash 2 x Period 2	$53.04^{**}_{\star}$	$36.22^{***}_{\star\star}$	5.85	4.49	6.33	$.13^{**}_{\star\star}$	$.15^{**}_{\star\star}$
	(24.82)	(12.77)	(9.15)	(2.94)	(6.96)	(.06)	(.06)
Cash 2 x Period 3	$66.13^{***}_{\star}$	26.98^{*}	5.96	5.06	15.93^{*}	$.12^{**}_{\star}$	.08
	(25.51)	(14.9)	(8.2)	(3.72)	(8.15)	(.06)	(.07)
Obs.	3122	3400	3470	3304	3291	3181	3186
Mean Cash 1							
Period 1	142.45	79.29	18.22	9.73	31.42	.44	.52
Period 2	100.45	60.22	8.35	5.92	19.83	.44	.39
Period 3	129.05	74.72	16.66	10.6	27.11	.46	.51

Notes: The dependent variables measure household savings in thousands of UGX and winsorized at the top 99^{th} percentile (columns 1 to 5), and food security, measured as a dummy equal to one if the household did not have to skip a meal (column 6) or did not run out of food in the previous month (column 7). Standard errors clustered at the household level. Statistical significance is indicated by $* \ p < 0.1$, $** \ p < 0.05$, $*** \ p < 0.01$ for unadjusted p-values and by $\star \ p < 0.1$, $\star\star \ p < 0.05$, $\star\star\star \ p < 0.01$ for p-values that are adjusted for multiple hypotheses testing.

[7] Saving groups include savings in Village and Loan Associations (VSLAs), Saving and Credit Cooperatives (SACCOs) or money guarded by someone else.

Households in the Cash 2 group received cash transfers worth UGX 424 thousand in 2020, but increased savings by about UGX 49 thousand only. We therefore deduce that the transfers were mainly spent, for instance on their businesses (see Table 3).

In sum, the cash offered during the pandemic increased business survival and limited the depletion of savings, thus placing households in a better position to benefit from the gradual opening up of society. This can explain the positive longer-term effects.

The cash support led to more than just profitable businesses. Table 4 shows that the cash transfer improved household food security, as measured by being able to provide all meals ("Meals") and having enough food ("Food") in the previous month.[8] In fact, while around 45 percent of the Cash 1 group provided all meals during Periods 2 and 3, this increases by 12-13 percentage points in the Cash 2 group, that is, a close to 30 percent increase. Similarly, while 39 percent in the Cash 1 group reported having enough food during Period 1, this goes up by 15 percentage point in the Cash 2 group, an almost 40 percent increase. In Period 3, a larger share of the Cash 1 households report having enough food, and we do not find any significant longer-term effect for Cash 2 households.

The results are robust to using a triple difference estimator, accounting for the difference in age of the target child between treatment and control (Tables A3 and A4). While the point estimates on income and savings are similar in magnitude or even larger, they are less precise, in particular in the longer term (Period 3).

5. Conclusion

We find that a temporary cash transfer was successful in shielding households from the sharp but relatively short-lived economic downturn in Uganda following the pandemic. In particular, we find evidence of improved business survival and performance, an increase

[8] The variable Meals takes the value one if the answer is "no" the following question: "Was there a time when you had to skip a meal because there was not enough money or other resources to get food?". Similarly, the variable Food takes the value one if the answer is"no" to the question: "Was there a time when your household ran out of food because of a lack of money or other resources?". While the questions on food security remained the same across survey waves, the reference period was changed from "last month" to "last week" in Period 3. Therefore, the levels in Period 3 should be interpreted with caution as they are not directly comparable to the previous periods.

in savings and a higher level of food security. Interestingly, the positive effects of the transfer are sustained over time, even one year after the payment of the last installment, highlighting the importance of capturing longer-term data when evaluating the effects of cash interventions.

These positive effects are in line with the broader literature on cash transfers, but not obvious a priori, given that they were offered in a time of crisis, with strict lockdown measures that could have limited the effectiveness of transfers. Our results show that even under these difficult conditions, beneficiary businesses managed to take advantage of the opportunities offered by the additional capital.

The quantitative effects of the cash grants are substantial, with an average increase of UGX 28 thousand in weekly household income in Period 2 and Period 3, driven by higher business revenues. Given that the average yearly cash transfer was UGX 424 thousand, the additional revenues would exceed the grant already after 15 weeks. Admittedly, this is based on revenues, not profits (the short phone surveys did not allow us to collect business costs). Still, the returns to the cash transfer are high, a fact which also points to severe capital constraints for the households in our sample.

It has been argued that the risk of global health crises is rapidly increasing, partly due to climate change, with low-income countries bearing the brunt of the burden (e.g. Carroll et al., 2018; Madhav et al., 2017). The policy lessons that can be derived from our study are, therefore, likely to be uncomfortably relevant also in the future.

References

Aggarwal, S., D. Jeong, N. Kumar, D. S. Park, J. Robinson, and A. Spearot (2020). Did COVID-19 market disruptions disrupt food security? Evidence from households in rural Liberia and Malawi. Working Paper 27932, National Bureau of Economic Research.

Bailey, S. and P. Harvey (2017). The DFID/ECHO approach to cash assistance for refugees in Lebanon. Working Paper 525, Overseas Development Institute.

Banerjee, A., M. Faye, A. Krueger, P. Niehaus, and T. Suri (2020). Effects of a Universal Basic Income during the pandemic. Working Paper, Innovations for Poverty Action.

Bastagli, F., J. Hagen-Zanker, L. Harman, V. Barca, G. Sturge, and T. Schmidt (2019). The impact of cash transfers: A review of the evidence from low-and middle-income countries. *Journal of Social Policy 48*(3), 569–594.

Benjamini, Y., A. M. Krieger, and D. Yekutieli (2006). Adaptive linear step-up procedures that control the false discovery rate. *Biometrika 93*(3), 491–507.

Bjorvatn, K., D. Ferris, S. Gulesci, A. Nasgowitz, V. Somville, and L. Vandewalle (2025). Childcare, labor supply, and business development: Experimental evidence from Uganda. *American Economic Journal: Applied Economics (forthcoming)*.

Brooks, W., K. Donovan, T. R. Johnson, and J. Oluoch-Aridi (2022). Cash transfers as a response to COVID-19: Experimental evidence from Kenya. *Journal of Development Economics 158*.

Bundervoet, T., M. E. Dávalos, and N. Garcia (2022). The short-term impacts of COVID-19 on households in developing countries: An overview based on a harmonized dataset of high-frequency surveys. *World Development*.

Carroll, D., P. Daszak, N. D. Wolfe, G. F. Gao, C. M. Morel, S. Morzaria, A. Pablos-Méndez, O. Tomori, and J. A. K. Mazet (2018). The Global Virome Project. *Science 359*(6378), 872–874.

Davis, G. (2021). The many ways COVID-19 affects households: Consumption, time, and health outcomes. *Review of Economics of the Household 19*, 281–289.

Dupas, P., M. Fafchamps, and E. Lestant (2023). Panel data evidence on the effects of the COVID-19 pandemic on livelihoods in urban Côte d'Ivoire. *PLOS One 18*(2).

Egger, D., E. Miguel, S. S. Warren, A. Shenoy, E. Collins, D. Karlan, D. Parkerson, A. M. Mobarak, G. Fink, C. Udry, et al. (2021). Falling living standards during the COVID-19 crisis: Quantitative evidence from nine developing countries. *Science Advances 7*(6).

Gentilini, U., M. Almenfi, I. Orton, et al. (2020). Social protection and jobs responses to COVID-19: A real-time review of country measures.

Hale, T., N. Angrist, R. Goldszmidt, B. Kira, A. Petherick, T. Phillips, S. Webster, E. Cameron-Blake, L. Hallas, S. Majumdar, and H. Tatlow (2021). A global panel database of pandemic policies (Oxford COVID-19 Government Response Tracker). *Nature Human Behaviour 5*, 529–538.

Hammond, J., K. Siegal, D. Milner, E. Elimu, T. Vail, P. Cathala, A. Gatera, A. Karim, J.-E. Lee, S. Douxchamps, et al. (2022). Perceived effects of COVID-19 restrictions on smallholder farmers: Evidence from seven lower-and middle-income countries. *Agricultural Systems 198*.

Hangoma, P., K. Hachhethu, S. Passeri, O. F. Norheim, J. Rivers, and O. Mæstad (2024). Short-and long-term food insecurity and policy responses in pandemics: Panel data evidence from COVID-19 in low-and middle-income countries. *World Development 175*.

Haushofer, J., R. Mudida, and J. Shapiro (2020). The comparative impact of cash transfers and a psychotherapy program on psychological and economic well-being. Working Paper 28106, National Bureau of Economic Research.

Haushofer, J., C. Ringdal, J. P. Shapiro, and X. Y. Wang (2019). Income changes and intimate partner violence: Evidence from unconditional cash transfers in Kenya. Working Paper 25627, National Bureau of Economic Research.

Haushofer, J. and J. Shapiro (2016). The short-term impact of unconditional cash transfers to the poor: Experimental evidence from Kenya. *Quarterly Journal of Economics 131*, 1973–2042.

Haushofer, J. and J. Shapiro (2018). The long-term impact of unconditional cash transfers: experimental evidence from Kenya. Working Paper.

Hidrobo, M., J. Hoddinott, A. Peterman, A. Margolies, and V. Moreira (2014). Cash, food, or vouchers? Evidence from a randomized experiment in northern Ecuador. *Journal of Development Economics 107*, 144–156.

Kansiime, M. K., J. A. Tambo, I. Mugambi, M. Bundi, A. Kara, and C. Owuor (2021). COVID-19 implications on household income and food security in Kenya and Uganda: Findings from a rapid assessment. *World Development 137*.

Karlan, D., M. Lowe, R. D. Osei, I. Osei-Akoto, B. N. Roth, and C. R. Udry (2022). Social protection and social distancing during the pandemic: Mobile money transfers in Ghana. Working Paper 30309, National Bureau of Economic Research.

Khamis, M., D. Prinz, D. Newhouse, A. Palacios-Lopez, U. Pape, M. Weber, et al. (2021). The early labor market impacts of COVID-19 in developing countries. Policy Research Working Paper 9510, World Bank.

Kirti, D., Y. Liu, M. S. Martinez Peria, J. Strasky, and P. Mishra (2022). Tracking Economic and Financial Policies during COVID-19: An announcement-level Database.

Macours, K., N. Schady, and R. Vakis (2012). Cash transfers, behavioral changes, and cognitive development in early childhood: Evidence from a randomized experiment. *American Economic Journal: Applied Economics 4*, 247–273.

Madhav, N., B. Oppenheim, M. Gallivan, P. Mulembakani, E. Rubin, and N. Wolfe (2017). Pandemics: Risks, Impacts, and Mitigation.

Mahmud, M. and E. Riley (2021). Household response to an extreme shock: Evidence on the immediate impact of the COVID-19 lockdown on economic outcomes and well-being in rural Uganda. *World Development 140*.

Mahmud, M. and E. Riley (2023). Adapting to an aggregate shock: The impact of the COVID-19 crisis on rural households. *Review of Economics of the Household 21*(1), 19–36.

Miguel, E. and A. M. Mobarak (2022). The economics of the COVID-19 pandemic in poor countries. *Annual Review of Economics 14*, 253–285.

Paxson, C. and N. Schady (2010). Does money matter? The effects of cash transfers on child development in rural Ecuador. *Economic Development and Cultural Change 59*, 187–229.

Stein, D., R. Bergemann, H. Lanthorn, E. Kimani, E. Nshakira-Rukundo, and Y. Li (2022). Cash, COVID-19 and aid cuts: A mixed-method impact evaluation among

South Sudanese refugees registered in Kiryandongo settlement, Uganda. *BMJ Global Health* 7(5).

Appendix A Test of Parallel pre-trends & estimates survey wave by survey wave

In this appendix, we report the difference-in-differences estimates calculated for each survey wave, instead of pooling the waves in periods. For the outcomes for which we have pre-Covid measures, this exercise also allows us to test whether the pre-trends are parallel: the pre-trends coefficients are given by "Cash 2 x S-1" and "Cash 2 x S-2" (S-3 is also observed pre-Covid-19 and is the omitted time period in these estimations).

We do this exercise both for the difference-in-differences estimates and for difference-in-differences-in-differences estimates.

A.1 Wave by wave (DD)

Table A1: Household income, wave by wave (DD)

	Total	Business	Wage	Agriculture
	(1)	(2)	(3)	(4)
Panel A: Extensive margin				
Cash 2 x S-1	0	-.02	-.02	.06
	(.06)	(.06)	(.06)	(.06)
Cash 2 x S-2	0	-.04	.02	.03
	(.03)	(.04)	(.05)	(.05)
Cash 2 x S-4	-.06	0	-.06	.05
	(.06)	(.06)	(.06)	(.05)
Cash 2 x S-5	$.14^{**}_{\star\star}$	$.2^{***}_{\star\star\star}$	-.04	$.15^{**}_{\star\star}$
	(.06)	(.06)	(.07)	(.06)
Cash 2 x S-6	-.02	$.13^{**}$	-.05	-.02
	(.05)	(.06)	(.07)	(.06)
Cash 2 x S-7	.05	.08	.05	0
	(.04)	(.05)	(.06)	(.06)
Cash 2 x S-8	.03	.07	.05	.06
	(.04)	(.06)	(.07)	(.05)
Obs.	4121	4109	4207	4225
Mean Cash 1				
Period 1	.89	.68	.4	.19
Period 2	.69	.54	.13	.13
Period 3	.91	.62	.43	.26
Panel B: Intensive margin				
Cash 2 x S-1	-12.67	-8.6	-2.86	1.19^{**}
	(23.2)	(19.47)	(5.63)	(.49)
Cash 2 x S-2	22.08	16.09	5.38	.45
	(16.41)	(15.17)	(3.88)	(.42)
Cash 2 x S-4	12.29	16.88	-5.91	.47
	(14.15)	(13.9)	(4.07)	(.89)
Cash 2 x S-5	$31.35^{**}_{\star}$	$26.63^{*}_{\star}$	-3.99	$5.8^{**}_{\star}$
	(15.78)	(13.91)	(5.35)	(2.43)
Cash 2 x S-6	10.41	15.22	-2.63	-.57
	(15.95)	(14.44)	(5.98)	(2.5)
Cash 2 x S-7	17.79	18.02	-.7	.15
	(14.56)	(14.34)	(4.44)	(.52)
Cash 2 x S-8	$37.23^{**}_{\star}$	$29.37^{*}_{\star}$	5.49	.41
	(15.49)	(15.17)	(4.02)	(.49)
Obs.	3967	4109	4112	4205
Mean Cash 1				
Period 1	90.77	73.36	12.76	.81
Period 2	45.1	31.41	7.94	5.21
Period 3	86.09	61.83	21.91	1.74

Notes: See Table 3 for a description of the dependent variables. Standard errors are clustered at the household level. Statistical significance is indicated by $* \; p < 0.1$, $** \; p < 0.05$, $*** \; p < 0.01$ for unadjusted p-values and by $\star \; p < 0.1$, $\star\star \; p < 0.05$, $\star\star\star \; p < 0.01$ for p-values that are adjusted for multiple hypotheses testing.

Table A2: Household savings, wave by wave (DD)

	Savings					Food security	
	Total	Groups	Bank	Mobile	Cash	Meals	Food
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Cash 2 x S-1	21.91	18.44	11.84	-6.61	-8.28		
	(49.76)	(22.55)	(18.27)	(5.86)	(14.84)		
Cash 2 x S-4	26.8	28.88	1.83	-.8	3.41	$.14^{*}_{\star\star}$	$.2^{***}_{\star\star\star}$
	(25.61)	(17.83)	(10.53)	(3.48)	(7.23)	(.07)	(.07)
Cash 2 x S-5	$75.42^{**}_{\star\star}$	$54.72^{***}_{\star\star}$	8.68	.06	4.79	.1	.07
	(30.22)	(19.91)	(10.04)	(4.76)	(7.37)	(.08)	(.08)
Cash 2 x S-6	$83.16^{***}_{\star\star\star}$	$51.51^{***}_{\star\star\star}$	$23.46^{**}_{\star\star}$	5.17	.5	$.17^{**}_{\star\star}$	$.17^{**}_{\star\star}$
	(23.11)	(15.65)	(10.7)	(4.05)	(7.45)	(.07)	(.07)
Cash 2 x S-7	$74.3^{***}_{\star\star}$	27.7	$21.24^{**}_{\star}$	2.03	12.51	.08	.07
	(25.27)	(17.15)	(10.34)	(5.9)	(8.07)	(.07)	(.08)
Cash 2 x S-8	$76.43^{***}_{\star\star\star}$	$43.1^{**}_{\star\star}$	2.14	2.4	12.33	$.17^{**}_{\star}$	.09
	(22.94)	(18.41)	(8.09)	(4.44)	(8.05)	(.07)	(.08)
Obs.	3122	3400	3470	3304	3291	3181	3186
Mean Cash 1							
Period 1	142.45	79.29	18.22	9.73	31.42	.44	.52
Period 2	100.45	60.22	8.35	5.92	19.83	.44	.39
Period 3	129.05	74.72	16.66	10.6	27.11	.46	.51

Notes: See Table 4 for a description of the dependent variables. Standard errors are clustered at the household level. Statistical significance is indicated by $* \ p < 0.1$, $** \ p < 0.05$, $*** \ p < 0.01$ for unadjusted p-values and by $\star \ p < 0.1$, $\star\star \ p < 0.05$, $\star\star\star \ p < 0.01$ for p-values that are adjusted for multiple hypotheses testing.

A.2 Wave by wave (DDD)

In our main specification, we use a difference-in-difference estimator (DD) that combines the randomization of the transfers with the discontinuity in the length of the treatment based on the age of the target child. We start from the "cash 2" group, which is the only group that received transfers during the pandemic. The first difference is in the value of the outcomes before versus during/after the pandemic in this group. The second difference comes from the comparison between "cash 2" and "cash 1", that is, those who continued receiving cash during the pandemic versus those who received support before the pandemic only.

This double difference (DD) provides a valid estimator if the trends in outcomes are parallel by cohort. In order to rely on weaker assumptions (allowing for different trends by birth cohort) and assess the robustness of our results, we estimate a triple difference in this section. We take the difference between the DD in the cash group versus the DD in the control group (who never received any transfer). In the control group, we know which households are the equivalent of "cash 2" and "cash 1" since these subgroups are defined by the year of birth of the target child.

We estimate:

$$\begin{aligned} Y_{i,t} = \alpha_0 &+ \alpha_1(Cash_i \times Period_2) + \alpha_2(Cash_i \times Period_3) + \beta_1(C_i \times Period_2) \\ &+ \beta_2(C_i \times Period_3) + \delta_1(Cash_i \times Treated_i \times Period_2) \\ &+ \delta_2(Cash_i \times C_i \times Period_3) + H_i + T_t + \epsilon_{i,t} \end{aligned} \tag{2}$$

where $Y_{i,t}$ is the value of the outcome for household i in period t; $Period_t$ is equal to one if the observation is collected during (Period 2) or after (Period 3) the treatment; $Cash_i$ is equal to one if the household was allocated to the cash treatment at some point in time and zero otherwise; and C_i is an indicator equal to one if the target child was three to four years old at baseline (the household received the transfers in 2019 and 2020) and zero if the child was aged 5 (the household received the transfers in 2019 only). Finally, H_i are household fixed effects, T_t are time fixed effects and $\epsilon_{i,t}$ is the error term.

The key variables, δ_1 and δ_2, are the triple-difference estimators of the effect of cash

transfers in Period 2 and Period 3. The DDD estimates are shown in Tables A3 and A4.

Table A3: Household income, wave by wave (DDD)

	Total	Business	Wage	Agriculture
	(1)	(2)	(3)	(4)
Panel A: Extensive margin				
Cash 1 x Cash 2 x S-1	-.04	-.06	-.04	.05
	(.09)	(.09)	(.09)	(.09)
Cash 1 x Cash 2 x S-2	.07	.04	.06	.05
	(.06)	(.06)	(.07)	(.07)
Cash 1 x Cash 2 x S-4	-.01	.07	.07	.01
	(.09)	(.09)	(.09)	(.07)
Cash 1 x Cash 2 x S-5	.2$^{**}_{\star\star}$	.3$^{***}_{\star\star}$	.02	.13$_{\star}$
	(.09)	(.1)	(.1)	(.09)
Cash 1 x Cash 2 x S-6	.01	.19**	-.01	.04
	(.07)	(.09)	(.09)	(.08)
Cash 1 x Cash 2 x S-7	.08	.09	.1	-.01
	(.07)	(.08)	(.09)	(.08)
Cash 1 x Cash 2 x S-8	.1	.14*	.12	-.04
	(.06)	(.08)	(.09)	(.08)
Obs.	8115	8092	8280	8312
Mean Cash 1				
Period 1	.84	.53	.4	.2
Period 2	.63	.45	.14	.15
Period 3	.89	.52	.48	.25
Panel B: Intensive margin				
Cash 1 x Cash 2 x S-1	3.94	5.99	-4.56	1.38**
	(28.89)	(24.78)	(7.3)	(.69)
Cash 1 x Cash 2 x S-2	39.66*	37.77*	1.26	.49
	(22.51)	(20.57)	(5.2)	(.58)
Cash 1 x Cash 2 x S-4	40.42**	36.21*	-.01	.1
	(20.19)	(18.67)	(5.93)	(1.42)
Cash 1 x Cash 2 x S-5	52.3$^{**}_{\star\star}$	40.53$^{**}_{\star\star}$	-3.75	9.94$^{**}_{\star\star}$
	(22.52)	(18.44)	(7.55)	(4.68)
Cash 1 x Cash 2 x S-6	19.54	27.27	-3.6	-.67
	(21.6)	(19.05)	(7.71)	(3.24)
Cash 1 x Cash 2 x S-7	7.44	10.64	-2.32	.23
	(20.38)	(19.92)	(5.92)	(.75)
Cash 1 x Cash 2 x S-8	56.27$^{***}_{\star\star}$	53.96$^{***}_{\star\star}$	.39	.17
	(21.25)	(20.7)	(5.96)	(.81)
Obs.	7798	8092	8078	8275
Mean Cash 1				
Period 1	76.68	57.85	15.18	.88
Period 2	45.16	27.75	8.44	6.52
Period 3	83.92	57.14	24.62	1.77

Notes: See Table 3 for a description of the dependent variables. Standard errors are clustered at the household level. Statistical significance is indicated by $*$ $p < 0.1$, $**$ $p < 0.05$, $***$ $p < 0.01$ for unadjusted p-values and by $\star$ $p < 0.1$, $\star\star$ $p < 0.05$, $\star\star\star$ $p < 0.01$ for p-values that are adjusted for multiple hypotheses testing.

Table A4: Household savings, wave by wave (DDD)

	Savings					Food security	
	Total	Groups	Bank	Mobile	Cash	Meals	Food
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Cash 1 x Cash 2 x S-1	-24.22	-9.16	-6.57	.34	-13.57		
	(61.75)	(30.44)	(21.14)	(8.79)	(18.29)		
Cash 1 x Cash 2 x S-4	50.07	41.25*	-.33	3.22	8.16	.05	.21$^{**}_{\star}$
	(37.66)	(22.84)	(15.48)	(4.45)	(9.75)	(.1)	(.1)
Cash 1 x Cash 2 x S-5	104.56$^{**}_{\star}$	62.95$^{**}_{\star}$	-1.55	6.21	9.91	-.03	.07
	(43.68)	(27.43)	(14.83)	(6.67)	(10.17)	(.1)	(.11)
Cash 1 x Cash 2 x S-6	59.49	19.4	23.54	12.42**	3.2	.16$_{\star}$	.21$^{**}_{\star}$
	(38.88)	(22.2)	(18.21)	(5.7)	(10.25)	(.11)	(.1)
Cash 1 x Cash 2 x S-7	34.57	19.49	.33	2.33	6.52	-.09	-.03
	(33.25)	(21.11)	(14.37)	(8.39)	(11.36)	(.1)	(.11)
Cash 1 x Cash 2 x S-8	77.42**	32.08	-10.51	8.45	15.54	.05	.03
	(37.71)	(22.67)	(14.69)	(5.91)	(11.77)	(.11)	(.1)
Obs.	6150	6707	6848	6485	6448	6255	6264
Mean Cash 1							
Period 1	118.81	62.91	16.16	9.24	26.13	.47	.49
Period 2	98.88	55.87	11.45	7.25	18.41	.49	.46
Period 3	115.25	61.22	12.17	11.33	24.82	.47	.5

Notes: See Table 4 for a description of the dependent variables. Standard errors are clustered at the household level. Statistical significance is indicated by $* \ p < 0.1$, $** \ p < 0.05$, $*** \ p < 0.01$ for unadjusted p-values and by $\star \ p < 0.1$, $\star\star \ p < 0.05$, $\star\star\star \ p < 0.01$ for p-values that are adjusted for multiple hypotheses testing.

Appendix B Robustness

In addition to the decomposition, survey wave by survey wave, reported in Appendix A, we report here the difference-in-differences estimates using the unbalanced panel, and the triple difference estimates.

B.1 Unbalanced panel

In this section, we report the estimation results, including interviews from households that were not interviewed in every period.

Table B1: Household income, unbalanced panel (DD)

	Total	Business	Wage	Agriculture
	(1)	(2)	(3)	(4)
Panel A: Extensive margin				
Cash 2 x Period 2	.02	$.11^{***}_{\star\star}$	-.05	-.01
	(.03)	(.04)	(.04)	(.03)
Cash 2 x Period 3	.02	$.07^{*}$	.04	-.04
	(.03)	(.04)	(.05)	(.04)
Obs.	5054	5039	5156	5177
Mean Cash 1				
Period 1	.88	.65	.41	.16
Period 2	.68	.51	.14	.14
Period 3	.92	.62	.45	.25
Panel B: Intensive margin				
Cash 2 x Period 2	$18.79^{*}_{\star}$	$20.41^{**}_{\star}$	$-5.54^{*}_{\star}$	$1.31_{\star}$
	(9.91)	(8.84)	(2.94)	(1.29)
Cash 2 x Period 3	$27.86^{***}_{\star\star}$	$24.51^{***}_{\star\star}$	.82	-.32
	(10.32)	(9.26)	(2.89)	(.36)
Obs.	4857	5039	5033	5153
Mean Cash 1				
Period 1	92.46	73.92	13.11	.68
Period 2	42.73	29.36	7.88	5.07
Period 3	86.59	61.93	22.48	1.67

Notes: See Table 3 for a description of the dependent variables. Standard errors are clustered at the household level. Statistical significance is indicated by $* \ p < 0.1$, $** \ p < 0.05$, $*** \ p < 0.01$ for unadjusted p-values and by $\star \ p < 0.1$, $\star\star \ p < 0.05$, $\star\star\star \ p < 0.01$ for p-values that are adjusted for multiple hypotheses testing.

Table B2: Household savings, unbalanced panel (DD)

	Savings					Food security	
	Total	Groups	Bank	Mobile	Cash	Meals	Food
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Cash 2 x Period 2	$45.52^{**}_{\star}$	$34.78^{***}_{\star\star\star}$	6.08	4.38^{*}	6.11	$.17^{***}_{\star\star\star}$	$.16^{***}_{\star\star\star}$
	(20.78)	(10.98)	(7.85)	(2.63)	(5.8)	(.06)	(.06)
Cash 2 x Period 3	$50.91^{**}_{\star}$	$23.15^{*}_{\star}$	5.63	4.06	$15.11^{**}_{\star}$	$.14^{**}_{\star\star}$	.08
	(23.44)	(12.69)	(8.75)	(3.51)	(6.92)	(.06)	(.06)
Obs.	3821	4169	4250	4040	4019	3845	3851
Mean Cash 1							
Period 1	124.67	70.82	16.68	9.45	28.53	.46	.51
Period 2	91.69	54.36	7.22	6.22	18.45	.44	.37
Period 3	129.35	71.72	18.35	11.58	25.89	.48	.5

Notes: See Table 4 for a description of the dependent variables. Standard errors are clustered at the household level. Statistical significance is indicated by $* \ p < 0.1$, $** \ p < 0.05$, $*** \ p < 0.01$ for unadjusted p-values and by $\star \ p < 0.1$, $\star\star \ p < 0.05$, $\star\star\star \ p < 0.01$ for p-values that are adjusted for multiple hypotheses testing.

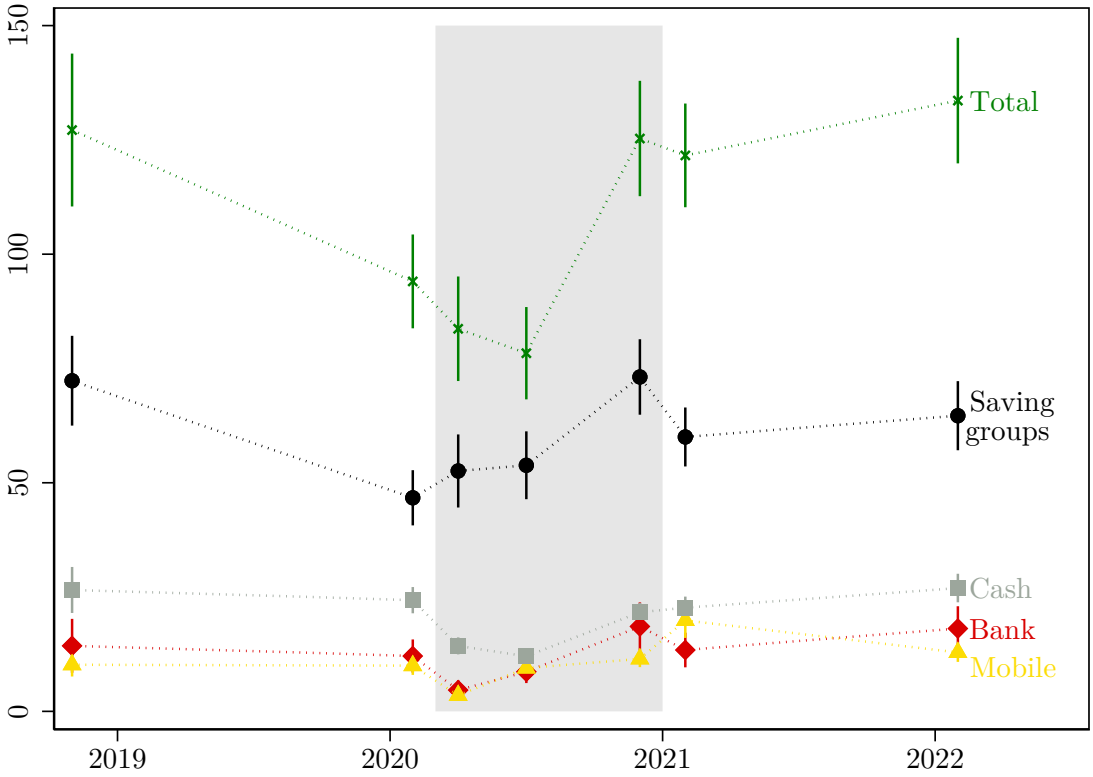
Appendix C Additional figures and tables

Table C1: Attrition

	Attrition
Cash 2 x Period 2	-0.007
	(0.018)
Cash 2 x Period 3	-0.022
	(0.022)
Period 2	0.062***
	(0.017)
Period 3	0.074***
	(0.020)
Observations	5456
Mean Cash 1	
Period 1	0.024
Period 2	0.079
Period 3	0.091

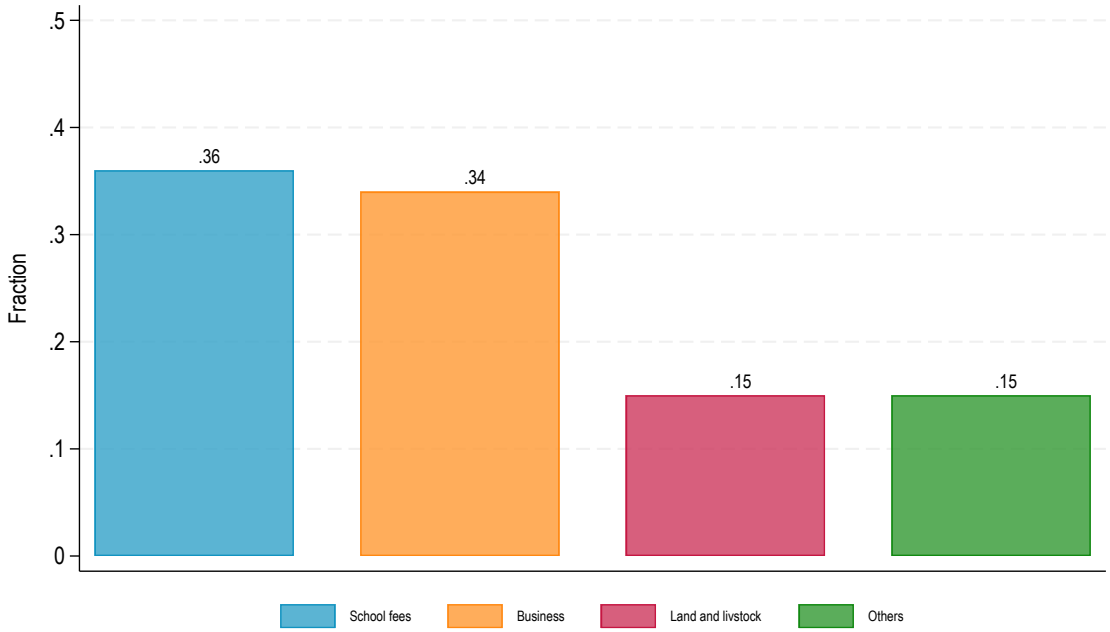
Notes: Attrition = 1 if the household could not be contacted during the respective period.

Figure C1: Savings (control group)



Note: The figure shows the evolution of the households' savings over time by categories (● saving groups, ◆ bank, ■ cash, ▲ mobile money) and × in total (in UGX 1,000, winsorized at the top 99^{th} percentile). The grey area indicates the lockdown period. The spikes correspond to a one standard error interval around the means.

Figure C2: Main use of cash transfer



Note: The figure shows the category that respondents spend the major part of the cash transfer on.

Table C3: Effects on business closures, by reason

	Closed	Reason							
		Funds	Workers	Demand	Supplies	Health	Covid	Move	Other
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Cash 2 x Period 2	-.14*	-.13$^{**}_{\star}$	.01	0	.06	-.03	.02$^{***}_{\star}$	-.01	-.06$^{**}_{\star}$
	(.07)	(.06)	(.01)	(.04)	(.04)	(.02)	(.01)	(.01)	(.02)
Cash 2 x Period 3	-.05	-.03	-.03	-.03	.07	-.04*	.01*	-.01	-.05**
	(.07)	(.05)	(.03)	(.04)	(.04)	(.03)	(0)	(.01)	(.02)
Obs.	1593	1589	1589	1589	1589	1593	1593	1593	1593
Mean Cash 1									
Period 1	.28	.12	.01	.07	.1	.01	0	0	.02
Period 2	.29	.25	0	.07	.05	.01	0	.01	.01
Period 3	.22	.16	.05	.1	.05	.03	0	.01	0

Notes: The dependent variable is one if at least one business was closed during the last 12 months due to the stated reason. Standard errors are clustered at the household level. Statistical significance is indicated by $* \ p < 0.1$, $** \ p < 0.05$, $*** \ p < 0.01$ for unadjusted p-values and by $\star \ p < 0.1$, $\star\star \ p < 0.05$, $\star\star\star \ p < 0.01$ for p-values that are adjusted for multiple hypotheses testing.

Table C2: Covid: Concerns, support and exposure

	Mean	SD	Min	Max	N
Share concerned (in %, S4)					
Employment loss	0.84	0.37	0	1	1395
Employment reduction	0.89	0.31	0	1	1395
School closure	0.85	0.36	0	1	1395
Sickness	0.82	0.38	0	1	1395
No agric. market	0.71	0.45	0	1	1395
Uncertainty	0.82	0.38	0	1	1395
No money for food	0.85	0.36	0	1	1395
No access to water	0.31	0.46	0	1	1395
Support					
Gvt transfer (*S4*)	0.00	0.04	0	1	998
Gvt transfer (*S5*)	0.02	0.15	0	1	1239
Informal loan, gift (*S4*)	0.15	0.36	0	1	1318
Informal loan, gift (*S5*)	0.27	0.45	0	1	1235
Informal loan, gift (*S6*)	0.26	0.44	0	1	1295
Exposure					
Know so infected (*S5*)	0.06	0.24	0	1	1239
Know so infected (*S6*)	0.31	0.46	0	1	1298
Know so dead (*S5*)	0.01	0.09	0	1	1239
Know so dead (*S6*)	0.24	0.43	0	1	1298
Perceived risk (*S5*)	2.79	0.99	1	5	1239
Perceived risk (*S6*)	2.85	1.08	1	5	1298

Notes: In bracket the survey round the respective variables were elicited. Perceived risk: How likely do you think it is that you or any of your family members will get infected with Covid, from 1 (very unlikely) to 5 (very likely).