# Final Report for Cash Benchmarking Study in Liberia and Malawi[*]

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June 9, 2022

# 1 Executive Summary

While there have been many studies showing positive effects of cash transfers on a variety of outcomes, there has been less research on the dynamic effects. This report summarizes evidence from an evaluation which attempts to fill this gap. The evaluation is of a randomized cash transfer program with households in 300 villages each in Liberia and Malawi, two of the poorest countries in the world.[1] In the experiment, all households in half of the sampled villages received unconditional cash transfers via mobile money (from the NGO

GiveDirectly), and those in the other half did not. The value of the transfer was large, averaging $500 (randomly varied between $250, $500, and $750), which is equivalent to about 86% of estimated *annual* household average expenditure in Liberia and 126% in Malawi. We implemented bi-monthly panel phone surveys with 20% of the sample (spanning the universe of sampled villages) that collected data on a number of outcomes. In the analysis, we focus on four outcomes that were pre-specified and which were measured in both phone and in-person surveys: food security, expenditures, income, and transfers. We supplement the phone surveys with an in-person endline survey administered about 18-25 months after cash had been disbursed, which measured the outcomes listed above as well as other key pre-specified outcomes, including psychological well-being, assets and wealth, intimate partner violence (IPV), household resilience, and agricultural input usage.

We have two main sets of results. First, we find meaningful dynamics on our key outcomes (though with different patterns in the two countries). In Malawi, food security increased by 0.5 standard deviations for the first few months after disbursement, but the treatment effect later attenuated to about a half of its original size within eight months, remaining at that level for two years. Expenditures increase dramatically immediately post-disbursement in Malawi (food expenditures double while non-food expenditures triple), but the treatment effect falls to being indistinguishable from zero within 8-10 months. In Liberia, we also find an immediate (yet smaller) increase in food security (0.3 SD), but no evidence of a decline over time. We find no statistically significant effects on food expenditures at any point in Liberia, but there is evidence of increased non-food expenditures. In both countries, we observe no effect on non-agricultural income. We find that very little of the transfer is shared: in Liberia, we find some modest evidence of increased transfers post-disbursement, but point estimates are only a few dollars; in Malawi, we observe no effect on transfers sent at any point. We observe similar, though slightly larger, effects on transfers received. We corroborate these effects using the endline survey 18-25 points months post-disbursements. The endline was conducted with the entire sample and thus allows tighter confidence intervals. In that endline,

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we find no effect on expenditures, transfers, or income in either country, but do find lasting effects on food security.

Second, we find that the cash transfers have substantial and significant improvements on other economic and psychological measures of well-being. In the endline survey, we find improvement on a number of primary pre-specified outcomes: non-land wealth increases by 25-30%, psychological well-being improves by 0.1-0.3 SD, and households' resilience to shocks improves by 0.1 SD. Several other outcomes are affected in one country only: intimate partner violence decreases by 8 percentage points in Liberia only, and spending on agricultural inputs increases by 16% in Malawi only. We also find changes on several outcomes pre-specified as secondary outcomes. In both countries, there is a sizeable reduction in the likelihood of being employed as a casual laborer and an associated decrease in casual labour hours. In Liberia, there is also a significant improvement in education for children - households report that more children are enrolled, that they spent more on education, and that children missed fewer days of school.[2].

The remainder of the report is structured as follows. Section 2 describes the experiment and data, Section 3 presents the main results, Section 4 includes a discussion of several subanalyses, and Section 5 shows subgroup analysis.

# 2 Setting, Experimental Design, and Data

## 2.1 Setting and experimental design

The NGO GiveDirectly (henceforth, GD) implemented the cash transfer program in Liberia and Malawi in 2019-2021 (Figure A1), aiming to enroll 150 treatment and 150 control villages in each country (so 600 total villages in the 2 countries). Targeted counties and districts were identified by GD and USAID, based on a variety of factors, including poverty levels, mobile

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[2]The reason that education effects are much stronger in Liberia than Malawi is because baseline school enrollment is much lower (only 52% of school-aged kids are enrolled, compared to 93% in Malawi)

phone coverage, and proximity to roads. Villages within each county/district were eligible if their population, as measured in the most recent population census, was less than 100 households in Malawi and less than 125 households in Liberia.[3,4] Targeting was universal: all households in treatment villages were eligible for the transfer. Within each household, the transfer was made to a beneficiary chosen by the household. Since beneficiary selection was endogenous, we consider the household to be the unit of analysis.

Amongst the 600 villages, we randomized treatment, stratifying by country and county/district. Cash transfer villages were randomized into one of three amounts: $250, $500 or $750. Within each treatment village in Liberia, transfers were also randomized between being paid as lump sum or quarterly.[5] The unconditional cash transfer (UCT) varied in its size ($250, $500, or $750), and for Liberia also in the timing of its disbursement (lump-sum or 4 quarterly payments).[6] As it took several months to enroll villages, the start date of transfers varied across treatment villages. There was also some variation in the roll-out of the transfers between countries. In Liberia, the project was implemented in two waves: a smaller first wave (90 villages), known as "Wave 1", in which transfers were disbursed from March 2019 to February 2020; and a larger second wave (210 villages), known as "Wave 2", in which transfers were disbursed from March 2020 to July 2021. The timing of transfers in Wave 2 was affected by COVID disruptions in 2020: enrollment of villages had to be paused during COVID-related lockdowns, resuming later.[7] In Malawi, all 300 villages were enrolled at once and transfers were disbursed from July 2019 to February 2020. All cash transfers were disbursed via mobile money; households who did not have prior access to mobile money

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[3]Since the transfers were universal, GiveDirectly targeted smaller villages in order to cover enough villages while staying within its budget.

[4]See Figure A2 for a map of study villages.

[5]In Malawi, we also attempted to randomly enroll either the female or male head of household, but implementation and data challenges prevented us from analyzing these data.

[6]Even for the lump sum sub-treatment, transfers were disbursed in 1-3 tranches. GiveDirectly capped the amount of the transfer as $250 in any one tranche, and then made additional tranches in the following months. Thus, for respondents receiving $250, they received one transfer; those receiving $500 or $750 received 2 or 3 transfers over consecutive months.

[7]See Aggarwal et al. (2020) for evidence from our phone surveys of the impact of COVID in these two countries

were provided with access to a mobile-money-enabled SIM during enrollment by GD.

Individual households were identified in collaboration with GD, who visited every village considered for study inclusion, and recorded every habitation structure with a GPS pin. This exercise was used to verify the actual population of the village, as well as providing a sampling frame for the baseline survey. For data collection, we sampled 10 pins from this list (with replacements), and attempted to interview those households (for a total of 6,000 households across the 2 countries). In some cases, however, we were only able to enroll fewer households. As a result, the total sample size for the study is 2,715 in Liberia and 2,944 in Malawi. Since IPV is one of our key outcomes, surveys were targeted at female heads of households.[8]

Two of the 10 households from every village were further randomly sampled to participate in a monthly phone survey that was designed to measure a pre-defined set of outcomes, largely related to food security. Each phone survey respondent was given a feature phone (worth $10-15) and a SIM card. The sample was drawn such that one household per village was called in even-numbered months, and the other in odd-numbered months. This results in a monthly village-level panel and a bi-monthly household-level panel. Because households were randomly selected, these respondents are representative of the approximately 32,000 households (with a total population of about 150,000) in these 600 villages.

Finally, in addition to the main cash transfer evaluation, to encourage agricultural investment, we cross-cut a "market access" intervention in which households were able to access agricultural inputs at locations near their home. In Liberia, agricultural retailers set up stalls at local market centers, whereas in Malawi, a major agricultural retailer set up events at prominent locations (such as schools). The intervention was intended to reduce transport costs close to zero. To accomplish this, households received a voucher to reimburse the cost of travelling to the event. The cost of transport was estimated from data collected on costs of travel. In Liberia, the transport subsidy was fixed for all households in a vil-

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[8]Male heads were interviewed only when the female was not present, and could not be reached. In these cases, the IPV module was not fielded.

lage and varied between \$0.20-9.50 with a median amount of \$1.90. In Malawi, households were randomly assigned to one of the four subsidy amounts: a flat reimbursement of 100 MK total, or a reimbursement based on the distance to the village, which was randomized among 200, 400, or 600 MK per kilometer. Overall, the voucher amount ranged between \$0.15-9 with a median of \$1. In both countries, agricultural inputs were made available at normal (unsubsidized) retail prices. Out of 300 villages in each country, 100 were randomly assigned to the market access intervention, such that 50 villages received both cash and the market access treatment ("cash-plus" treatment), 50 villages received only market access, leaving 100 villages in cash only and 100 in the pure control arm. However, in Liberia, the market access intervention was implemented in Wave 1 villages only (the planting season corresponding to Wave 2 coincided with the COVID-19 lockdowns of 2020, and it was not possible to carry out any field-related activities at that time).[9] While the cash transfers were universal within the village, the transport cost subsidy was directed only to a subset of farmers. In Liberia, we targeted only the study households; in Malawi, we additionally enrolled another 20 randomly selected farmers.[10]

## 2.2 Data

This study uses data from four primary sources.[11] First, we conducted a baseline survey at the beginning of the project in November-December 2018 for Liberia Wave 1, November-December 2019 for Liberia Wave 2, and April-July 2019 for Malawi. This survey included a battery of questions on demographics, agriculture, income, expenditures, food security, financial services, mobile money usage, shocks and resilience, and IPV.

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[9]Out of 90 villages in wave-1, 30 villages received market access (15 received cash-plus, 15 only market access), 30 cash-only , and remaining 30 villages constituted pure control.

[10]Field officers visited the sampled households 1-2 weeks before the scheduled event and shared the event information with the households and provided a pamphlet with event date and location on it. The intervention was time sensitive as farmers need inputs at the beginning of the planting season. In Liberia, the market access intervention took place in April-May 2019; in Malawi, it took place in early October 2019.

[11]We attempted to obtain information on the mobile money transactions of respondents, but were unable to obtain this data.

Second, we conducted an endline survey in 2020-2021.[12] The endline was conducted in late 2020 for Liberia Wave 1 (about 18-20 months after the cash transfer), late 2021 for Liberia Wave 2 (about 18-22 months after disbursement) and April-July 2021 in Malawi (about 21-25 months after disbursement).

Third, as discussed above, 20% of the sample (2 households per village) was randomized into a phone survey. These surveys included questions on food security, expenditures, income, labor supply, transfers, savings, and credit.[13] We designed these surveys such that each household was called every other month, with each household within a village alternating months. Hence, each village has a data point for every month. The phone surveys were administered from July 2019 to August 2021 in Malawi, and between February 2019 and October 2021 in Liberia, depending upon the wave.[14]

Fourth, we collected monthly price data over a two-year period from 80 markets in Liberia and 95 in Malawi, starting before the cash transfer distributions.[15] Figure A2 shows the location of study villages and markets. In each market, we enrolled a set of vendors, a total of 1,220 vendors in Liberia (333 in Wave 1 and 887 Wave 2), and 1,378 vendors in Malawi.[16]

Attrition for the endline and phone surveys is shown in Table A1 and Table A2, respectively. In both countries, our endline attrition rate was low and balanced across treatment and control groups: 96% of all households completed the endline in Liberia, and 94% in Malawi, and there is no evidence of differential attrition in either country (Columns 1 and 2). In the phone survey, attrition is relatively low and is balanced by treatment in Malawi. Over 95% of the sample participated in early rounds and though this percentage fell over

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[12]See Jeong et al. (2022) and Park et al. (2022) for analyses of cross-randomized survey experiments on survey length and on the measurement of IPV, respectively, in these baseline and endline surveys.

[13]During COVID-19 lockdowns, we also included additional questions related to COVID awareness, behavior change, and self-reported impacts.

[14]Wave 1 villages participated in the phone surveys between February 2019 to September 2020, and Wave 2 villages participated in the phone surveys between January 2020 and October 2021.

[15]Twenty-three of the 80 markets in Liberia were in cash transfer areas, and the remaining in non-treatment areas. In Malawi, 10 markets were in the cash transfer areas, and 85 in non-treatment areas. We selected one treatment market per traditional authority in Malawi, and all major markets in treatment areas in Liberia.

[16]Vendors were enrolled if they were present in the market on the day of visit, had access to a mobile phone, and sold the necessary food items. We tried to enroll at least 2 vendors per market.

time, we still successfully interviewed 80% or more after 2 years. However, attrition is substantially higher in Liberia, due in large part to the inferior phone network in the country. In particular, in Wave 1, we had an unfortunate problem, where households in the treatment group were more likely to switch to the SIM card provided by GD, thus making it more difficult to reach these respondents. We therefore drop Liberia Wave 1 entirely from the phone analysis. In Wave 2, compliance is balanced, but is lower than Malawi: compliance peaks at about 75% immediately after enrollment, but falls below 50% within 8 or 9 rounds (16-18 months). Figure A1 provides a timeline of project and data collection activities.

## 2.3 Summary statistics and randomization check

Table 1 presents summary statistics and a randomization balance check before the program. Columns 1 and 4 show the means and standard deviations of the control group in Liberia and Malawi, respectively. Columns 2 and 5 show the $p$-values for a test of equality between the pooled treatment group and control, and Columns 3 and 6 report the $p$-values for an F-test of equality of means across the 3 sub-treatments ($250, $500, and $750) and control. These coefficients and p-values are estimated via regressions controlling for stratification fixed effects and clustering standard errors at the village level.

Because we targeted women, the sample is primarily female: 77% of the sample in Liberia and 94% in Malawi are women. Eighty-four percent are married in Liberia, and 67% in Malawi. The average age is similar across countries: 39.1 in Liberia and 40.5 in Malawi. Levels of education are low, averaging 2.9 years in Liberia and 4.8 years in Malawi. On average, households have approximately 4.6-4.8 members. None of these show significant differences across treatment and control at conventional levels.

Panel B shows a set of primary outcomes measured at baseline, including food security,[17]

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[17]The food security index is a weighted average of the standardized z-scores of four measures: Household Dietary Diversity Score (HDDS), a 24-hour recall that sums the number food items consumed, from a list of 12 items (specifically, these are Cereals, Roots and tubers, Vegetables; Fruits; Meat, poultry, offal; Eggs; Fish and seafood; Pulses, legumes, nuts; Milk and milk products; Oil/fats; Sugar/honey; and "Miscellaneous," FAO 2013); the Food Consumption Score (FCS), a weighted sum of the number of days

food and non-food expenditures, assets, income, IPV prevalence, transfers, household's resilience to shocks, and purchase amount of agricultural inputs. Overall, total monthly expenditures in the control group are about \$49 in Liberia and \$33 in Malawi, with food expenditures being about 42% of total expenditures. The total net value of durables, livestock, and financial assets is about \$100 in Liberia and \$90 in Malawi. Approximately 48% of women in Liberia and 32% in Malawi reported they have experienced some form of intimate partner violence. Again, the sample is balanced in these attributes across treatment and control.

Overall, the table shows that the randomization was successful in creating four treatment arms that were similar across observable dimensions. In any case, in our baseline specifications, we always control for baseline measures of the outcome variables in an ANCOVA specification, as was specified in the pre-analysis plan.

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each of those items had been consumed (WFP 2008); the Household Hunger Scale (HHS), a summary of extreme hunger incidences in the past month, ranging from 0 (less severe) to 6 (more severe) (Ballard et al. 2011); and the Food Insecurity Experience Scale (FIES), a summary of household food insecurity events, similar to HHS but recalling the past 12 months, ranging from 0 (less insecure) to 8 (more insecure) (Cafiero et al. 2018). The Food Security Index (z-score) is calculated using inverse covariance weighting (Anderson 2008) relative to the control mean and SD in each country.

## Table 1: Baseline Summary Statistics and Experimental Balance

| | (1) | (2) | (3) | (4) | (5) | (6) |
|---|---|---|---|---|---|---|
| | | Liberia | | | Malawi | |
| | Control Mean [SD] | p-value: pooled treatment = control | p-value: equality over 4 arms | Control Mean [SD] | p-value: pooled treatment = control | p-value: equality over 4 arms |
| **Panel A. Demographics** | | | | | | |
| =1 if female | 0.77 | 0.630 | 0.899 | 0.94 | 0.695 | 0.487 |
| =1 if currently married or has partner | 0.84 | 0.188 | 0.101 | 0.67 | 0.263 | 0.689 |
| Age | 39.14 | 0.998 | 0.995 | 40.45 | 0.607 | 0.879 |
| | [13.92] | | | [15.08] | | |
| Years of education | 2.90 | 0.673 | 0.460 | 4.75 | 0.430 | 0.778 |
| | [3.76] | | | [3.41] | | |
| Number of household members | 4.58 | 0.618 | 0.706 | 4.76 | 0.448 | 0.734 |
| | [2.21] | | | [2.09] | | |
| | | | | | | |
| **Panel B. Primary outcomes measured at baseline** | | | | | | |
| Food security index (z-score) | -0.00 | 0.992 | 0.002 | 0.00 | 0.445 | 0.833 |
| | [1.00] | | | [1.00] | | |
| Food expenditure (past month) | 20.52 | 0.827 | 0.650 | 13.96 | 0.677 | 0.869 |
| | [16.71] | | | [14.81] | | |
| Non-food expenditure (past month) | 28.04 | 0.307 | 0.730 | 19.18 | 0.800 | 0.569 |
| | [28.56] | | | [21.66] | | |
| Net value of durables, livestock, financial assets | 101.94 | 0.796 | 0.936 | 89.74 | 0.334 | 0.796 |
| | [207.58] | | | [187.75] | | |
| Non-agricultural income (past month) | 6.61 | 0.229 | 0.607 | 5.50 | 0.732 | 0.111 |
| | [15.55] | | | [14.20] | | |
| =1 if any IPV (past year) | 0.48 | 0.929 | 0.224 | 0.32 | 0.921 | 0.726 |
| Transfers received (USD, past month) | 0.33 | 0.728 | 0.841 | 0.14 | 0.061 | 0.079 |
| | [0.97] | | | [0.38] | | |
| Transfers sent (USD, past month) | 0.98 | 0.728 | 0.841 | 0.41 | 0.061 | 0.079 |
| | [2.92] | | | [1.15] | | |
| Resilience to shocks (z-score) | -0.00 | 0.135 | 0.414 | 0.00 | 0.431 | 0.767 |
| | [1.00] | | | [1.00] | | |
| Agricultural input purchase (USD, past year) | 4.35 | 0.597 | 0.928 | 18.18 | 0.644 | 0.667 |
| | [13.18] | | | [23.25] | | |
| Observations | | 2,715 | | | 2,944 | |

Note: Columns 1 and 4 present the mean for the control groups; Columns 2 and 5 report the p-values for testing difference between the pooled cash treatment and control groups; Columns 3 and 6 report the p-values for testing difference across individual treatment arms by cash amounts (i.e. 250, 500, or 750 dollars) and the control group. Standard deviations are in square brackets in Columns 1 and 4 and standard error clustered at village level in parentheses in Columns 2,3,5 and 6. Monetary outcomes are in USD and winsorized at the 99th percentile. ***, **, and * represent significance at 1%, 5%, and 10%, respectively.

# 3 Results

We first estimate time-varying treatment effects using phone-survey data, focusing primarily on food security, expenditures, non-agricultural income, and interpersonal transfers. Using the endline data, we then measure whether these effects persist, as well as measure the impacts on a broader set of outcomes. All outcome variables and specifications were pre-specified in our pre-analysis plan, though there are a few small deviations from the plan (Aggarwal et al. 2021a).[18]

We estimate the impact of the cash transfers over time using the following specification:

$$Y_{ivst} = \sum_t \beta_t Cash_{vs} D_{tvs} + \gamma Y_{ivs0} + \delta MA_{vs} + \phi_m + \lambda_s + \varepsilon_{ivst} \tag{1}$$

where $Y_{ivst}$ is an outcome for individual $i$ in village $v$ and strata $s$ at time $t$, which is defined as the number of months since the treatment villages in the strata first received cash transfers. $Cash_{vs}$ is a binary variable equal to 1 if the village was assigned to any cash transfer, 0 otherwise; $D_{tvs}$ is a binary variable indicating $t$ number of months since villages received the first transfers. $Y_{ivs0}$ is the baseline value of the outcome variable; $MA_{vs}$ is an indicator for the market access intervention; and $\phi_m$ and $\lambda_s$ are calendar month and strata fixed effects, respectively. We cluster our standard errors at the village level, the level of randomization. For all outcomes, we present results graphically. We supplement results from this specification with a second set (shown in the Appendix A) which pools surveys across all time periods. We do not show the market access coefficients for most specifications, but only for agricultural outcomes in Section 3.5.

We estimate the impact of the cash transfers at endline using a similar specification. As it is only for one time period, the equation does not include time fixed effects or the number

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[18]In particular, we make the following modifications. First, in the PAP, we pre-specify a set of outcomes that appear in the endline survey. For the dynamic effects analysis, we focus on those outcomes which were measured in the phone surveys and were on that list (food security, expenditures, income, and transfers). Second, we disaggregate total expenditures into food and non-food expenditures (as opposed to showing food and total expenditures as separate categories, as pre-specified). Third, we show only inter-household transfers as our primary outcome (i.e. we do not include spousal transfers).

of calendar months since disbursement. The equation is as follows:

$$Y_{ivs} = \beta Cash_{vs} + \gamma Y_{ivs0} + \delta MA_{vs} + \lambda_s + \varepsilon_{ivs} \tag{2}$$

where $Y_{ivs}$ is the value of the outcome at endline. When running this specification, we once again cluster standard errors at the village level, and control for the market access intervention.

## 3.1 Dynamic effects on pre-specified outcomes

Figure 1 plots coefficients and confidence intervals from Equation (1) for food security outcomes in each country.[19] In the phone surveys, we only measured the HDDS, FCS, and HSS (with recall periods of 24 hours, 1 week, and 1 month, respectively), and not the FIES (which has a one-year recall) - as a result, the index measure for phone surveys is based on these three measures only. The figures pool two months together so that the comparison across points in the graph is for the same set of respondents. Before taking a closer look at the effects on food security, please note that, despite the high level of poverty described earlier, the average household would not actually be considered "food insecure" based on the standard cut-offs used by the Integrated Food Security Phase Classification (IPC).[20] The IPC considers households to be under no or minimal food stress if the HDDS is greater than 4, the FCS is greater than 35, or if the HHS score is less than 2. As can be seen in Figure 1, the average household in each country does better than these cut-offs. Nevertheless, these are still poor households with limited access to food and as we will show later, some part of the distribution would be considered food-stressed even by the IPC standards.

In Malawi, we observe a spike in food security immediately after the cash was distributed: indexed over the 3 measures, food security increased by over 0.5 standard deviations in the first six months (statistically significant at 1%). The impact becomes smaller over time,

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[19]See Section 2.3 for details about which and how subcomponents are indexed.
[20]See https://www.ipcinfo.org/.

falling to approximately 0.2 standard deviations by the 8th month. These levels persist for the duration of the survey period (approximately 2 years after the initial cash transfer). These impacts are mirrored in the individual components. HDDS improves by 0.75 items on average immediately after the transfers, settling down to an enduring treatment effect of 0.25 items by month 8; the FCS immediately improves by about 7 points, with a long-term improvement of 2 points; and the improvement in HHS is about 0.5 points soon after the transfers, and the effect attenuates to about 0.2 at 8 months out. Please note that while the HDDS and the FCS are closely related (and correlated) measures, they are quite different from the HHS in what they measure. As a result, the close correspondence in the pattern of effects for these measures also serves as a data quality check for the phone surveys.

The picture is slightly different for Liberia: while there is also a clear increase in food security outcomes immediately after the transfer, the magnitude is smaller, approximately 0.25-0.4 standard deviations. This effect persists for the duration of the survey. As is evident in Figure 1, food security outcomes in the treatment group appear to improve in the round *before* the first transfer payment. Although this increase is not statistically significant, neither are many of the post-transfer estimates. This increase could be for several reasons. First, we determine the transfer date based on records received from GD, and it is possible that the transfer occurred in between months 0 and 1. Second, treatment households could have anticipated the cash transfer (as they were informed of its distribution), and hence started spending before the arrival of the transfer. For this reason, we interpret the results in Liberia with more caution. Nevertheless, the lasting impact of the transfer is corroborated in the endline survey (see below).

Figure 1: Effects of Cash on Food Security Over Time

(a) Household Dietary Diversity Score
(baseline control mean = 5.7, 5.4)
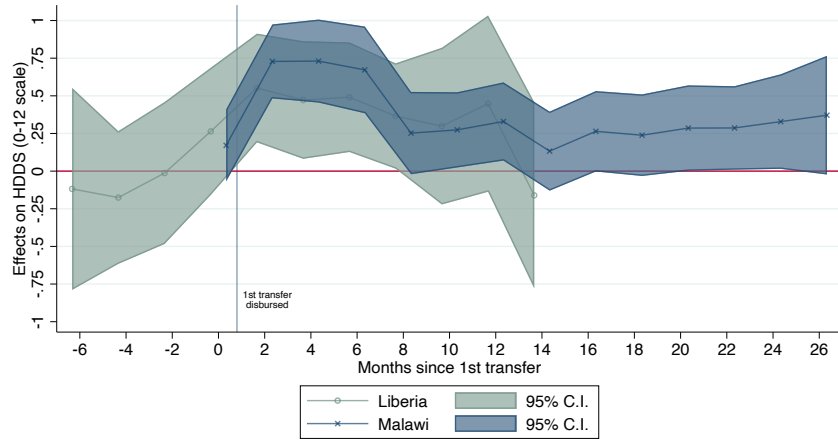
(b) Food Consumption Score
(baseline control mean = 48.0, 46.3)
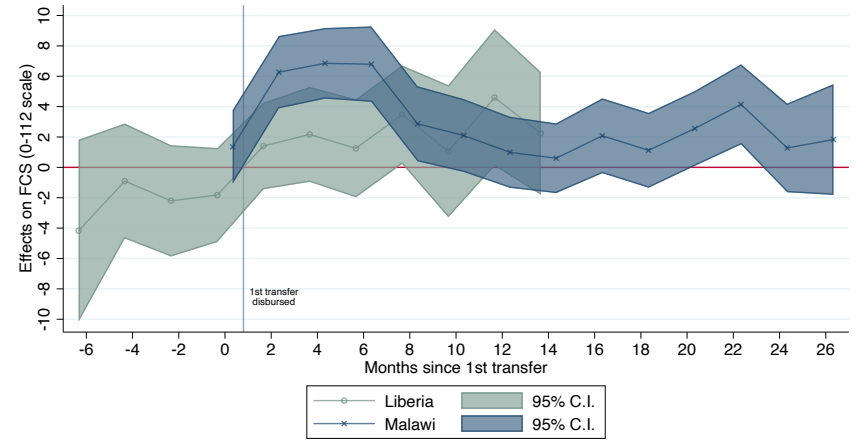
(c) Household Hunger Scale
(baseline control mean = 1.2, 1.2)
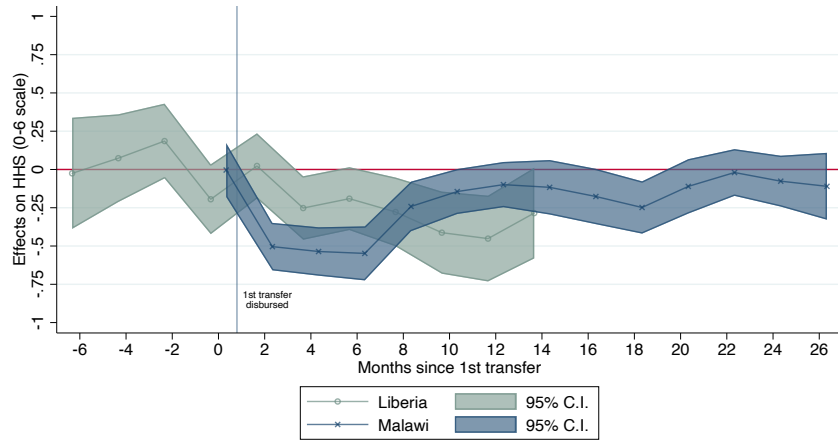
(d) Food Security Index
(z-score)
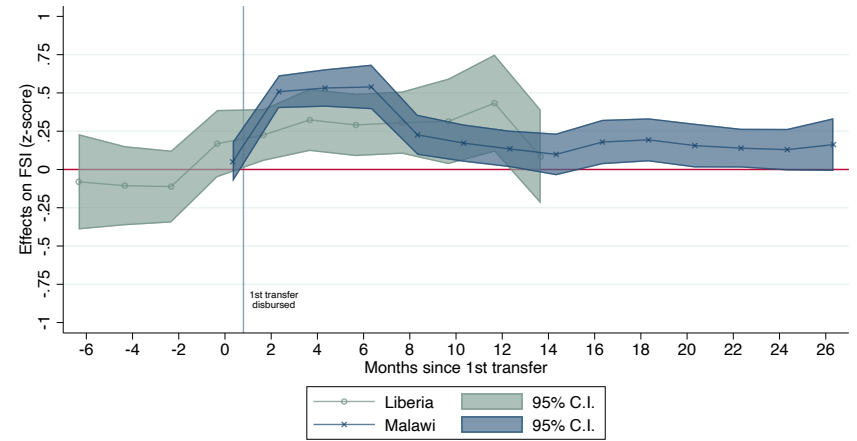
Note: Regressions include baseline measurement of outcome and strata fixed effects. Standard errors clustered at village level. First transfer for each treatment household was made across July-October 2019 for Malawi and March-September 2020 for Liberia (Wave 2). Sample includes 596 households in Malawi and 358 in Liberia (Wave 2). In panel (d), outcome variable is the re-standardized z-score of HDDS, FCS, and HHS (negatively weighted) per Anderson (2008).

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We next assess the impact of the treatment on food and non-food expenditures in both countries (Figure 2). In Malawi, food expenditures increased significantly for the first 2-6 months after the cash transfer, and then declined to zero within 10 months (Panel A). In Liberia, there are no impacts at any point during our 14-month phone survey period. The pattern is similar for non-food expenditures (Panel B). Another piece of corroborating evidence is Figure A3, which shows large purchases, and which shows a clear effect post-disbursement in Malawi, though not in Liberia.

## Figure 2: Effects of Cash on Expenditures Over Time

### (a) Food Expenditures
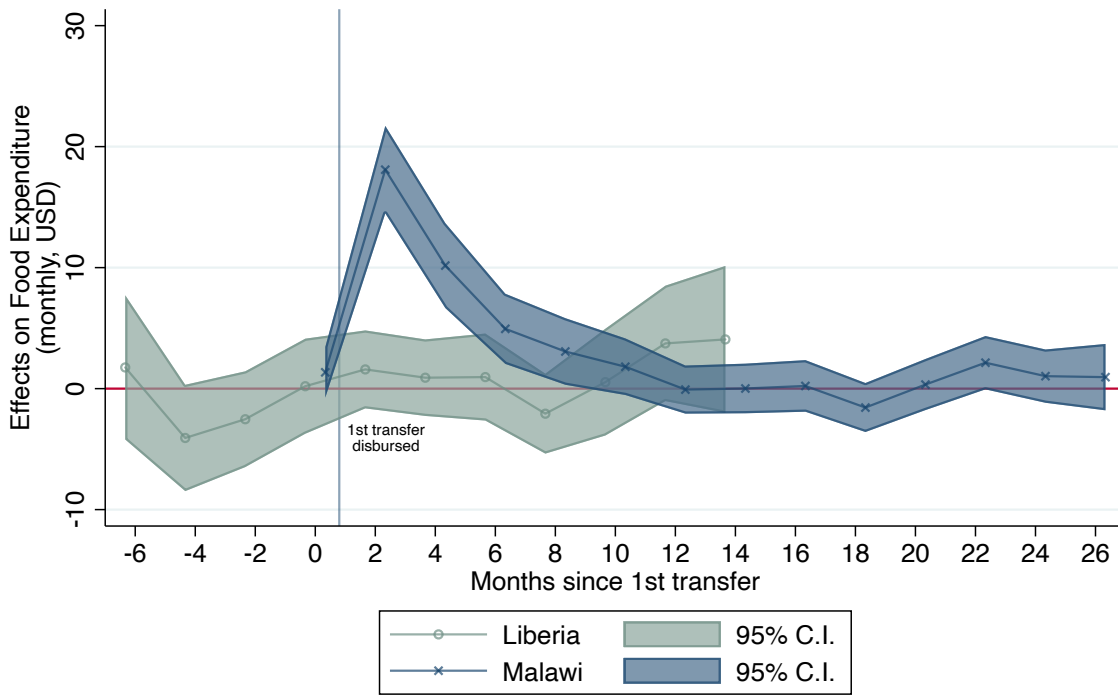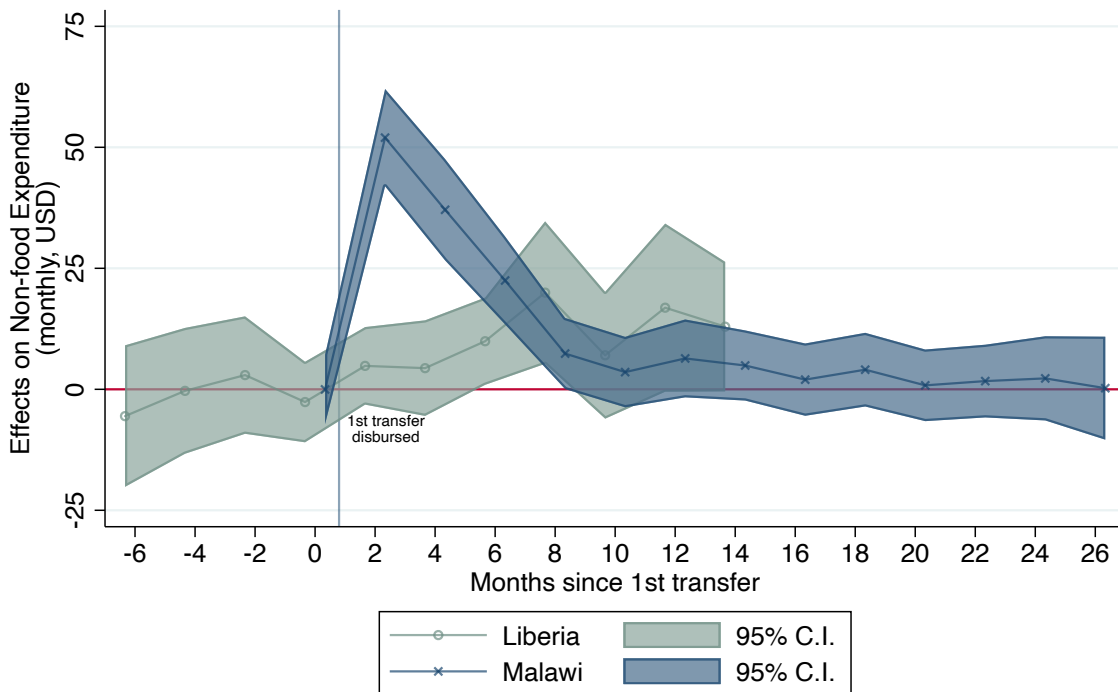


### (b) Non-food Expenditures



Note: Regressions include baseline measurement of outcome and strata fixed effects. Standard errors clustered at village level. First transfer for each treatment household was made across July-October 2019 for Malawi and March-September 2020 for Liberia (Wave 2). Sample includes 596 households in Malawi and 358 in Liberia (Wave 2).

Figure 3 shows the impact of the cash transfers on non-agricultural income. In stark contrast with much of the cash transfer literature, we find no effect of the cash transfer on income in either country at any point in time.

Figure 3: Effects of Cash on Non-agricultural Income Over Time
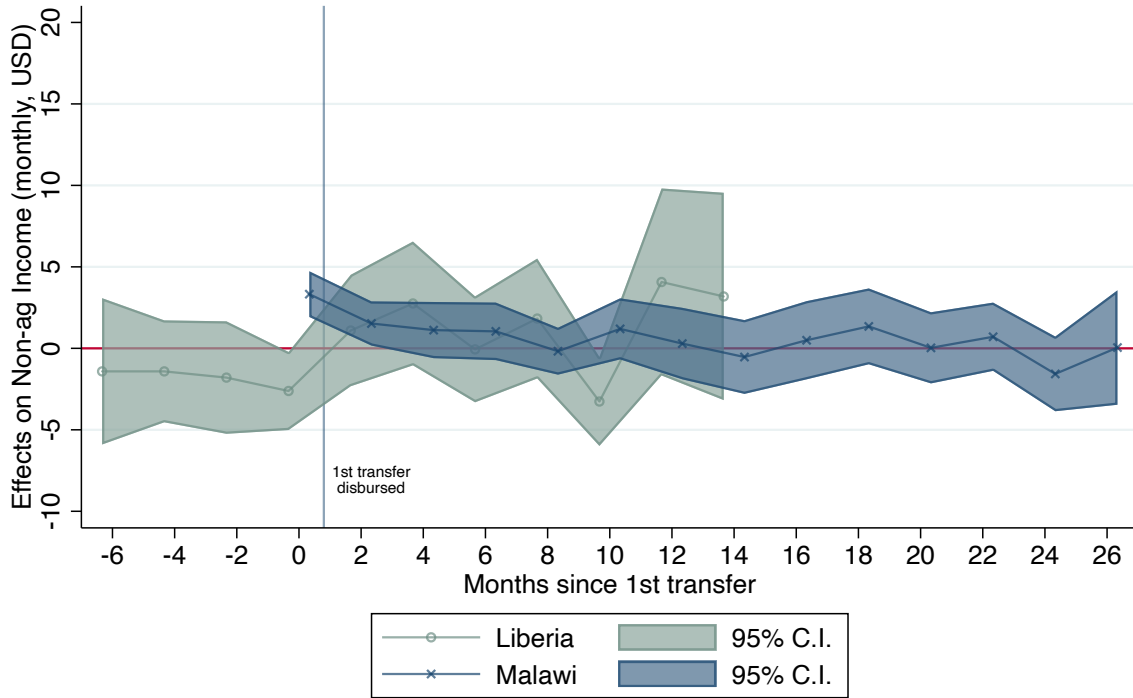


Note: Regressions include baseline measurement of outcome and strata fixed effects. Standard errors clustered at village level.First transfer for each treatment household was made across July-October 2019 for Malawi and March-September 2020 for Liberia (Wave 2). Sample includes 596 households in Malawi and 358 in Liberia (Wave 2).

Finally, Figure 4 shows the treatment effects on interpersonal transfers (excluding transfers to the spouse). Looking at the effects on transfers sent and received, there is no evidence that beneficiary households are more likely to send or receive transfers in both countries, though the point estimates are bigger in Liberia, but also more imprecise.

Figure 4: Effects on Transfers Sent and Received
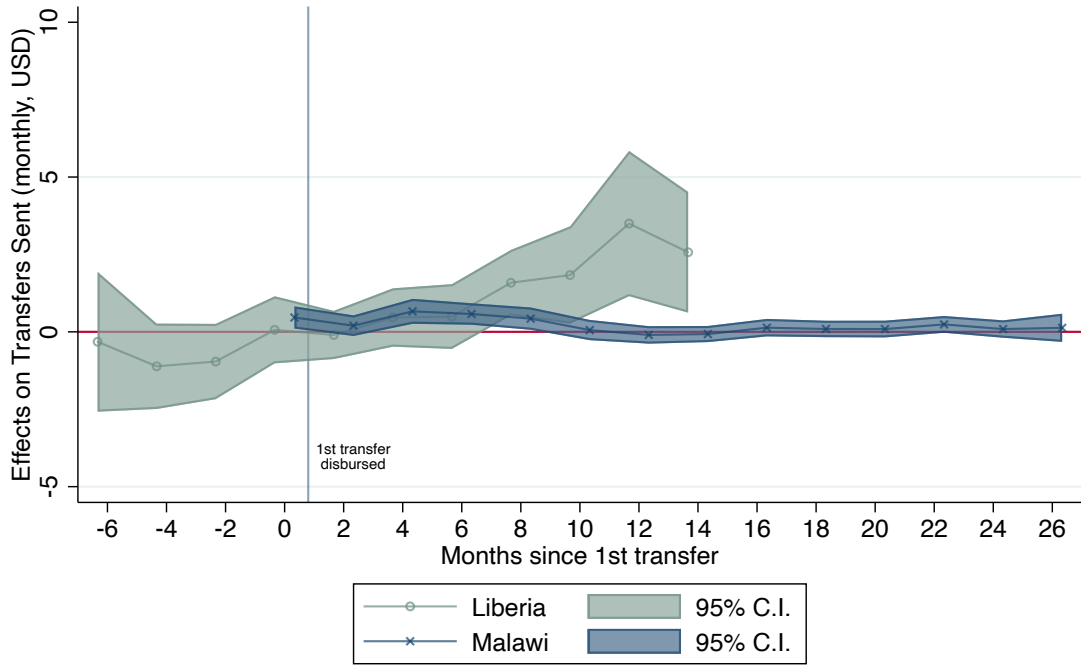
(a) Transfers Sent (past month)



(b) Transfers Received (past month)
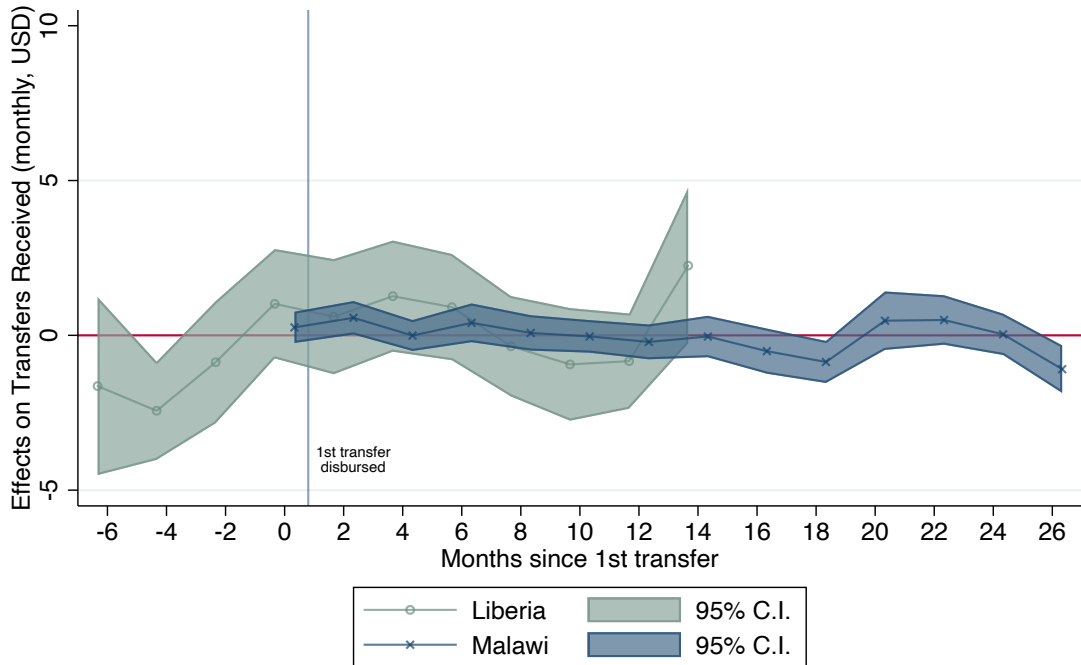


Note: Regressions include baseline measurement of outcome and strata fixed effects. Standard errors clustered at village level. First transfer for each treatment household was made across July-October 2019 for Malawi, and March-September 2020 for Liberia (Wave 2). The sample includes 595 households in Malawi, and 358 in Liberia (Wave 2).

## 3.2 Effects on Food Security, Expenditures and Income in Endline Survey

Table 2 shows the effects on these same outcomes in the endline survey. In each table, Panel A shows the results for Liberia, Panel B shows the results for Malawi, and Panel C shows the pooled results. In each panel, we report both pooled effects and treatment effects by cash amount. In this section, we focus on the pooled results, while we discuss the effects by the amount of the cash transfer in Section 3.5.

Consistent with the phone survey results, we see significant improvements in food security in the pooled endline sample. Households in treated villages had a food security index that was 0.31 s.d. higher in Liberia (Panel A) and 0.12 s.d. higher in Malawi (Panel B), both of which are statistically significant at the 1 percent level. Table B1 shows clear evidence of improvements across components of the index: 3 of 4 measures are statistically significant in Liberia, and 2 of 4 in Malawi. Looking at the individual components, we the HHS and the FIES improve significantly in both countries as a result of the cash transfer, whereas the HDDS is only statistically significant in Liberia. The HHS and FIES tend to focus on the quantity of food that is consumed (i.e. How many meals were skipped? How many days did the household go without food?), and cover a longer time period (a month and a year, respectively), whereas the HDDS is about consumption over the past day, and the FCS is over the past week. When pooled, both HDDS and FCS are in the expected direction (and HDDS is significant at 1%).

In Appendix C, we analyze food security outcomes by food security classification. Specifically, we show the likelihood of transition between various food security categories as a causal effect of the transfers. In Table C1, which uses HDDS as an indicator, we find that in Liberia, there was a 4 percentage point reduction (on a base of 24%) in the likelihood of a household being in food insecurity Phase 3 ("Crisis") and a corresponding 5 pp increase in no or minimal food stress. HDDS is unimpacted in Malawi. While HHDS and FCS are closely related, Table C2. shows that the effects on FCS were somewhat different than those for HDDS.

We find that in Liberia, households were respectively 3 and 2 pp less likely to be classified as being in a crisis or in an emergency, and a 5 pp improvement in being minimally food stressed. In Malawi, there was a 3 pp reduction in the likelihood of being in Phase 3 and a 3 pp improvement in being in Phase 1 or 2. Using HHS also, we find similar transitions from Phase 3 to Phases 1 or 2 in both countries.

Similar to the effects for food security, the results for food expenditures and non-agricultural income are also consistent with those of the phone surveys, and in both countries, we find no effects on either measure at endline. Expenditures are no higher than the control in Malawi, while non-food expenditures are 19% higher in Liberia (though food expenditures are the same as the control). Columns 5 and 6 show transfers (measured over the past month). We see no evidence of sending transfers to others or of receiving from others.

Table 2: Effects on Food Security, Income, Expenditures and Transfers (Measured at Endline)

| | (1)<br>Food<br>Security[a]<br>(past year) | (2)<br>Food<br>Expend<br>(past month) | (3)<br>Non-food<br>Expend<br>(past month) | (4)<br>Non-ag<br>Income[b]<br>(past month) | (5)<br>Transfers<br>Sent<br>(past month) | (6)<br>Transfers<br>Received<br>(past month) |
|---|---|---|---|---|---|---|
| **Panel A. Liberia** | | | | | | |
| *Pooled cash treatment:* | | | | | | |
| Cash | 0.31*** | 0.68 | 5.91*** | 1.54 | -0.45 | -0.34 |
| | (0.04) | (0.89) | (1.58) | (1.33) | (0.38) | (0.47) |
| *Individual treatments by cash amount:* | | | | | | |
| Cash 250 | 0.19*** | -1.13 | 2.64 | 2.57 | -0.93** | -0.57 |
| | (0.06) | (1.17) | (2.67) | (2.55) | (0.45) | (0.55) |
| Cash 500 | 0.28*** | 1.87 | 7.20*** | 1.98 | -0.23 | -0.40 |
| | (0.06) | (1.37) | (2.23) | (1.58) | (0.47) | (0.58) |
| Cash 750 | 0.47*** | 1.31 | 7.90*** | 0.07 | -0.20 | -0.05 |
| | (0.06) | (1.11) | (1.99) | (1.89) | (0.47) | (0.67) |
| | | | | | | |
| Control mean | 0.00 | 26.91 | 31.63 | 8.15 | 2.00 | 2.63 |
| Control SD | 1.00 | 21.46 | 37.38 | 27.30 | 11.29 | 14.26 |
| *p*-value (all three equal) | 0.000 | 0.092 | 0.205 | 0.606 | 0.174 | 0.739 |
| Observations | 2,595 | 2,595 | 2,595 | 2,595 | 2,595 | 2,595 |
| | | | | | | |
| **Panel B. Malawi** | | | | | | |
| *Pooled cash treatment:* | | | | | | |
| Cash | 0.12*** | 0.45 | 0.56 | 0.90 | 0.01 | 0.17 |
| | (0.04) | (0.47) | (0.56) | (0.82) | (0.06) | (0.19) |
| *Individual treatments by cash amount:* | | | | | | |
| Cash 250 | 0.06 | 0.40 | 0.09 | 2.39* | 0.03 | 0.06 |
| | (0.05) | (0.60) | (0.76) | (1.36) | (0.08) | (0.26) |
| Cash 500 | 0.12** | -0.09 | 0.53 | -0.71 | -0.08 | 0.10 |
| | (0.05) | (0.65) | (0.78) | (0.96) | (0.07) | (0.27) |
| Cash 750 | 0.17*** | 1.04 | 1.07 | 1.01 | 0.08 | 0.34 |
| | (0.06) | (0.75) | (0.88) | (1.13) | (0.09) | (0.28) |
| | | | | | | |
| Control mean | 0.00 | 9.56 | 12.29 | 9.38 | 0.42 | 1.01 |
| Control SD | 1.00 | 10.81 | 14.63 | 20.43 | 1.84 | 4.31 |
| *p*-value (all three equal) | 0.268 | 0.429 | 0.642 | 0.082 | 0.124 | 0.682 |
| Observations | 2,784 | 2,784 | 2,784 | 2,784 | 2,784 | 2,784 |
| | | | | | | |
| **Panel C. Pooled** | | | | | | |
| *Pooled cash treatment:* | | | | | | |
| Cash | 0.21*** | 0.56 | 3.17*** | 1.17 | -0.23 | -0.09 |
| | (0.03) | (0.49) | (0.83) | (0.77) | (0.19) | (0.25) |
| *Individual treatments by cash amount* | | | | | | |
| Cash 250 | 0.13*** | -0.32 | 1.36 | 2.36* | -0.44* | -0.25 |
| | (0.04) | (0.65) | (1.35) | (1.42) | (0.22) | (0.29) |
| Cash 500 | 0.21*** | 0.85 | 3.79*** | 0.49 | -0.17 | -0.15 |
| | (0.04) | (0.75) | (1.16) | (0.90) | (0.23) | (0.31) |
| Cash 750 | 0.30*** | 1.17* | 4.39*** | 0.65 | -0.06 | 0.15 |
| | (0.04) | (0.66) | (1.10) | (1.10) | (0.23) | (0.36) |
| | | | | | | |
| Control mean | 0.00 | 17.98 | 21.68 | 8.78 | 1.19 | 1.80 |
| Control SD | 1.00 | 18.94 | 29.69 | 24.02 | 8.01 | 10.44 |
| *p*-value (all three equal) | 0.002 | 0.134 | 0.144 | 0.469 | 0.210 | 0.556 |
| Observations | 5,379 | 5,379 | 5,379 | 5,379 | 5,379 | 5,379 |

Note: The endline was conducted about 18-22 months after first transfers were received in Liberia and 21-25 months in Malawi. Regressions include baseline measurement, strata fixed effects, and indicator for market access treatment. Monetary outcomes are in USD and Winsorized at the 99th percentile. Standard errors clustered at the village level in parentheses. ***, **, and * represent significance at 1%, 5%, and 10%, respectively.
[a] Food Security Index is standardized z-score of HDDS, FCS, HHS (negatively weighted), and FIES (negatively weighted), using inverse covariance weighting (Anderson 2008) relative to the control mean and SD in each country.

We now turn to examining the individual sub-components of the outcomes presented in Table 2.

We present expenditures in Table B2. As would be expected in the case of any normal goods, we find that the treatment effects on expenditure are positive across the board, although they're statistically significant only for a handful of categories - clothes, education, home repairs, and religious contributions - and only in the case of Liberia. These categories are similar to what we observed in the phone surveys as well.

We present income in Table B3. For income, consistent with the phone surveys, we find no effects on any category of income in Malawi, for neither the respondent nor for their spouse. We find some mixed effects in Liberia, with casual labor income going down and self-employment income going up for the respondent, and "other" income going up for the spouse.

We present transfers in Table B4. Finally, we find no effect on transfers sent or received to/from either the spouse or anyone else in Malawi. The effects in Liberia are similar, other than a significant positive effect on transfers from spouse.

## 3.3 Effects on other primary outcomes

Table 3 shows the effects of the cash transfers on primary outcomes that were only measured at endline, including wealth, intimate partner violence, psychological well being and resilience.

Consistent with every other completed evaluation of cash transfers, Column 1 in Table 3 shows that there are sustained (and large) effects of the cash transfers on non-land wealth, ranging from $56 in Liberia to $31 in Malawi. These effects are equivalent to 25-30% of the means of the control group in each country.[21] Table B5 reports more detail on the specific components of non-land wealth. Expenditures on durables increased in both countries, and

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[21]Table B5 investigates different types of non-land wealth. In both countries, cash transfers increase ownership of durable goods, livestock, and farm tools, as well as the amount of savings. While there is a significant increase in business capital in Liberia, this is not the case in Malawi.

this matches the anecdotal field reports that many cash grants were spent on household improvements. There was a significant increase in livestock purchases in Malawi, especially in the larger cash groups, but no such impact in Liberia. There were additional purchases of farm tools in both countries. Business capital did not change in Malawi, but did increase in Liberia (though oddly for only the two lowest cash transfer amounts). Savings increased in both countries, but debt did not in either country.

Given the food security results described earlier, one possible mechanism for food security to have improved is through the flow of nutrients available from livestock purchases. Table B6 reports the effects of the cash transfers on herd size, purchases, sales, and consumption of the herd. In Malawi and Liberia, herd size increased with the cash transfers. The effect is slightly larger in Malawi than Liberia. however, in Liberia, there are no changes in purchases, sales, or consumption of one's herd, which only leaves the interpretation that herd size increased in Liberia through maintenance of existing animals, for example if animals were fed better or vaccinated properly and their mortality went down. In Malawi, on the other hand, purchases (in expenditures) went up by about 60%, sales went up by about 30%, and consumption also increased in both numbers and value.

Column 2 of Table 3 shows that ever-partnered women in cash transfer households in Liberia were 8 percentage points less likely to experience IPV, with no effects in Malawi. A possible explanation for seeing treatment effects in Liberia, but not Malawi, is that baseline prevalence in the control group is much higher in Liberia (where 38% of women reported experiencing IPV in the past year in the control group) than in Malawi (where 18% of the control group did).[22] In Table B7, we examine the components of the IPV index, and find that in Liberia, there was a consistent decline in all manner of IPV, and it is statistically significant for emotional and sexual IPV. For Malawi, we do not detect any treatment effects for any IPV category.

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[22]For IPV, we cross-randomized two measurement tools: audio computer-assisted self interviewing (ACASI) and conventional, face-to-face interviewing (FTFI). We find compelling evidence that a significant portion of the sample are making mistakes in the ACASI module (Park et al. 2022), we restrict the analysis to those measured in FTFI.

For both countries, we see large improvements in psychological well-being (Table 3, Column 3), ranging from 0.10-0.34 s.d. The cash transfers also had positive and statistically significant effects on self-reported resilience in both countries (Table 3, Column 4).

Table 3: Effects on Other Primary Outcomes (Endline Survey)

| | (1) Non-land Wealth | (2) Any IPV[a] (past year) | (3) Psychosocial Well-being (past 2 weeks) | (4) Resilience (past year) |
|---|---|---|---|---|
| **Panel A. Liberia** | | | | |
| *Pooled cash treatment:* | | | | |
| Cash | 56.11*** | -0.08*** | 0.34*** | 0.09** |
| | (10.52) | (0.03) | (0.04) | (0.04) |
| *Individual treatments by cash amount:* | | | | |
| Cash 250 | 46.33*** | -0.05 | 0.28*** | 0.14*** |
| | (15.36) | (0.04) | (0.06) | (0.05) |
| Cash 500 | 70.05*** | -0.10*** | 0.36*** | 0.07 |
| | (17.04) | (0.04) | (0.06) | (0.05) |
| Cash 750 | 51.86*** | -0.08** | 0.37*** | 0.06 |
| | (15.37) | (0.04) | (0.05) | (0.06) |
| | | | | |
| Control mean | 123.60 | 0.38 | -0.00 | 0.00 |
| Control SD | 231.62 | 0.49 | 1.00 | 1.00 |
| *p*-value (all three equal) | 0.522 | 0.560 | 0.402 | 0.403 |
| Observations | 2,595 | 1,229 | 2,595 | 2,595 |
| | | | | |
| **Panel B. Malawi** | | | | |
| *Pooled cash treatment:* | | | | |
| Cash | 30.91*** | 0.01 | 0.10** | 0.12*** |
| | (7.74) | (0.01) | (0.04) | (0.04) |
| *Individual treatments by cash amount:* | | | | |
| Cash 250 | 5.60 | 0.01 | 0.04 | 0.10* |
| | (9.57) | (0.02) | (0.06) | (0.06) |
| Cash 500 | 30.08*** | 0.01 | 0.11* | 0.11** |
| | (9.42) | (0.02) | (0.06) | (0.05) |
| Cash 750 | 58.08*** | -0.01 | 0.16** | 0.15*** |
| | (12.97) | (0.02) | (0.06) | (0.04) |
| | | | | |
| Control mean | 125.32 | 0.18 | 0.00 | 0.00 |
| Control SD | 218.11 | 0.39 | 1.00 | 1.00 |
| *p*-value (all three equal) | 0.001 | 0.599 | 0.277 | 0.674 |
| Observations | 2,784 | 1,829 | 2,784 | 2,784 |
| | | | | |
| **Panel C. Pooled** | | | | |
| *Pooled cash treatment:* | | | | |
| Cash | 43.59*** | -0.03** | 0.21*** | 0.11*** |
| | (6.59) | (0.01) | (0.03) | (0.03) |
| *Individual treatments by cash amount* | | | | |
| Cash 250 | 25.92*** | -0.01 | 0.16*** | 0.12*** |
| | (8.86) | (0.02) | (0.04) | (0.04) |
| Cash 500 | 49.58*** | -0.03* | 0.23*** | 0.09** |
| | (10.00) | (0.02) | (0.04) | (0.04) |
| Cash 750 | 55.51*** | -0.03* | 0.26*** | 0.10*** |
| | (10.36) | (0.02) | (0.04) | (0.04) |
| | | | | |
| Control mean | 124.48 | 0.27 | 0.00 | 0.00 |
| Control SD | 224.73 | 0.44 | 1.00 | 1.00 |
| *p*-value (all three equal) | 0.033 | 0.575 | 0.117 | 0.848 |
| Observations | 5,379 | 3,058 | 5,379 | 5,379 |

Note: The endline was conducted about 18-22 months after first transfers were received in Liberia and 21-25 months in Malawi. Regressions include baseline measurement, strata fixed effects, and indicator for market access treatment. Monetary outcomes are in USD and Winsorized at the 99th percentile. Standard errors clustered at the village level in parentheses. ***, **, and * represent significance at 1%, 5%, and 10%, respectively.
[a] Includes only women and those for whom IPV was measured in face-to-face interviewing.

## 3.4  Effects on secondary outcomes

Beyond the outcomes measured above, we also specified a number of indices of secondary outcomes in our pre-analysis plan. We show treatment effects on these indices in Table 4 and on the components of each index in Appendix D.

First, in Table 4, we show evidence of a decline in labor supply hours in both countries, statistically significant in the case of Liberia. Table D1 disaggregates these effects on hours across own farm, casual labor, labor within one's own business, and other jobs (the index is the sum of hours worked across these categories). While cash had a modestly significant impact in Liberia on hours worked at "other jobs", increasing hours worked by 1.05 from a control mean of 1.98, there was no discernible impact in Malawi, and none in the pooled sample. In both countries, there was no impact of cash on labor supply within one's own business. However, these results may be different in other contexts where it is easier to start and expand small businesses. Interestingly, we do find a significant decline in casual labor supply in both countries. We also did not administer a time use module, and so we are unable to document whether respondents substituted toward other activities, productive or otherwise.

Next, we examine an index of household health investments, which is defined as an average of the z-scores of two metrics: percentage of household members that sought preventative care in the past 3 months and percentage of households that slept under a bednet on the previous night. We find a 0.12 standard deviation improvement in this index in the case of Liberia, though we find no change in the case of Malawi. Columns 1 and 2 of Table D2 examine the components of the index. We observe that the improvement in the index in Liberia is driven entirely by an increased likelihood of sleeping under a bed net, with a 5pp effect on a control mean of 0.72. There was no effect on bed net usage in Malawi, which had a similar control mean. For both countries, we do not find any change in seeking preventative care, but we note that while cash may have alleviated liquidity-related demand-side constraints to seeking preventative care, we do not know if preventative care is easy to

access in these contexts, i.e., there may be supply-side constraints that remain unaddressed, and which may prevent households from finding the medical care that they are interested in seeking.

In Column 3 of Table 4, we examine an index of childhood vaccinations, which is an average of 2 z-scores: one for the proportion of household members under the age of 18 who have received any vaccinations and the other for the proportion of children under the age of 5 who have received the recommended vaccinations. We find no impact on the index in either country and as shown in Columns 3 and 4 of Table D2, we also don't find any change in either component in both countries. Please note, however, that the proportion of children under-5 with the recommended vaccinations is already high at 91%, and therefore, this may be a difficult metric to move with cash alone.

Next, we show a household health index which is the average across all household members of z-scores for the number of illnesses in the previous month. We find no treatment effect on this outcome other than for the largest transfer amount in Liberia, although the treatment effects are consistently negative. This pattern is also mirrored in the component analysis shown in Column 1 of Table D3.

We now examine resilience to health shocks, which we define as an average of 4 z-scores: (a) percentage of ill household members treated illness at all, (b) percentage of ill household members delayed treatment, (c) total number of missing days of work due to illness, and (d) total number of missing days of school due to illness, all measured over the month prior to the survey. We find no evidence of improved resilience in the summary measure. On examining the individual components in Table D3, we find that except for the high cash group in Liberia, there is no impact on treatment-seeking behavior. Counterintuitively, however, we also find that in Liberia, the cash groups missed more work days due to illness. This may be the case if having more money affords people the ability to take time off work when they are sick; however, this is pure speculation. Our prior was that the treatment group would need to take fewer days off work either via enhanced investments in preventative health

or through timely treatment-seeking. The findings in Malawi are in line with our priors. Finally, in Column 7, we examine effects on expenditures related to medical treatment, and find a strong and significant effect in Liberia. It is possible therefore, that the results on taking time off work may be driven by taking time off specifically to seek treatment, and as before, we reiterate that these effects may therefore vary by context, depending upon how easy or difficult it is to access treatment providers.

In Column 6 of Table 4, we analyze the household education index, an average of the following z-scores: percentage of children currently enrolled in school, average number of school days missed in the past 12 months (per child), percentage of school days attended in the past week, and education expenditure in the past 6 months. We find an improvement in the index for Liberia, but no change in the case of Malawi. When we examine the subcomponents in Table D4, we find that in Liberia, there were positive effects on educational investment and school enrollment, and also number of days attended. Liberia has a very low school enrollment rate: in our sample only 52% of school-aged children are enrolled, compared to 93% in Malawi (Column 1, Table D4). Treatment increases this by about 10%, in part because educational expenditures increase. We see improvements on all measures of school enrollment. In Malawi, we observe no such effects, likely because enrollment was already high to begin with. However, even for Malawi, we do find a small decrease in the number of school days missed due to a lack of money (as well as for any other reason).

Table 4: Effects on Secondary Outcomes (Endline Survey)

| | (1) Total labor supply hours (past month) | (2) Health investment index | (3) Children vaccination index | (4) Household health index | (5) Resilience to health shocks index | (6) Household education index | (7) Social capital index | (8) Public goods contribution index |
|---|---|---|---|---|---|---|---|---|
| **Panel A. Liberia** | | | | | | | | |
| *Pooled cash treatment:* | | | | | | | | |
| Cash | -8.21** | 0.12*** | 0.04 | -0.04 | -0.06 | 0.41*** | 0.08* | 0.09* |
| | (3.96) | (0.04) | (0.08) | (0.05) | (0.07) | (0.11) | (0.05) | (0.05) |
| *Individual treatments by cash amount:* | | | | | | | | |
| Cash 250 | -10.14* | 0.14** | 0.04 | -0.06 | -0.04 | 0.35** | 0.06 | 0.04 |
| | (5.43) | (0.06) | (0.11) | (0.07) | (0.10) | (0.14) | (0.07) | (0.06) |
| Cash 500 | -9.51** | 0.12** | 0.08 | 0.04 | -0.03 | 0.47*** | 0.03 | 0.16** |
| | (4.52) | (0.06) | (0.11) | (0.07) | (0.09) | (0.14) | (0.07) | (0.07) |
| Cash 750 | -4.98 | 0.11** | -0.01 | -0.10* | -0.11 | 0.43*** | 0.15** | 0.06 |
| | (5.54) | (0.05) | (0.09) | (0.05) | (0.11) | (0.14) | (0.07) | (0.07) |
| | | | | | | | | |
| Control mean | 71.54 | 0.00 | 2.25 | -0.00 | 2.11 | 3.61 | 0.00 | -0.00 |
| Control SD | 90.12 | 1.00 | 1.00 | 1.00 | 1.07 | 1.01 | 1.00 | 1.00 |
| *p*-value (all three equal) | 0.659 | 0.899 | 0.690 | 0.197 | 0.779 | 0.653 | 0.309 | 0.294 |
| Observations | 2,595 | 2,595 | 642 | 2,595 | 704 | 245 | 2,585 | 2,595 |
| | | | | | | | | |
| **Panel B. Malawi** | | | | | | | | |
| *Pooled cash treatment:* | | | | | | | | |
| Cash | -0.94 | -0.02 | -0.06 | -0.02 | -0.01 | -0.07 | 0.05 | -0.02 |
| | (2.60) | (0.04) | (0.07) | (0.04) | (0.06) | (0.05) | (0.04) | (0.04) |
| *Individual treatments by cash amount:* | | | | | | | | |
| Cash 250 | 1.77 | -0.03 | -0.19 | -0.01 | -0.04 | -0.03 | 0.10* | -0.05 |
| | (3.59) | (0.06) | (0.12) | (0.06) | (0.07) | (0.06) | (0.05) | (0.04) |
| Cash 500 | -1.49 | -0.04 | 0.01 | -0.04 | 0.09 | -0.14* | 0.02 | 0.00 |
| | (3.63) | (0.05) | (0.07) | (0.06) | (0.07) | (0.09) | (0.06) | (0.06) |
| Cash 750 | -3.18 | -0.00 | -0.01 | -0.01 | -0.07 | -0.05 | 0.04 | -0.00 |
| | (3.36) | (0.06) | (0.09) | (0.05) | (0.08) | (0.06) | (0.06) | (0.05) |
| | | | | | | | | |
| Control mean | 41.65 | -0.00 | 3.46 | 0.00 | 2.94 | 2.25 | -0.00 | -0.00 |
| Control SD | 64.24 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| *p*-value (all three equal) | 0.475 | 0.840 | 0.257 | 0.876 | 0.181 | 0.450 | 0.421 | 0.534 |
| Observations | 2,784 | 2,784 | 966 | 2,784 | 1,495 | 1,757 | 2,760 | 2,784 |
| | | | | | | | | |
| **Panel C. Pooled** | | | | | | | | |
| *Pooled cash treatment:* | | | | | | | | |
| Cash | -4.45* | 0.05 | -0.03 | -0.03 | -0.02 | -0.01 | 0.06** | 0.03 |
| | (2.35) | (0.03) | (0.05) | (0.03) | (0.04) | (0.05) | (0.03) | (0.03) |
| *Individual treatments by cash amount* | | | | | | | | |
| Cash 250 | -3.90 | 0.05 | -0.10 | -0.03 | -0.04 | 0.02 | 0.08* | -0.01 |
| | (3.24) | (0.04) | (0.08) | (0.05) | (0.06) | (0.06) | (0.04) | (0.04) |
| Cash 500 | -5.40* | 0.04 | 0.04 | -0.00 | 0.05 | -0.07 | 0.02 | 0.08* |
| | (2.90) | (0.04) | (0.06) | (0.05) | (0.06) | (0.08) | (0.05) | (0.04) |
| Cash 750 | -4.05 | 0.05 | -0.01 | -0.06 | -0.08 | 0.01 | 0.09** | 0.03 |
| | (3.19) | (0.04) | (0.06) | (0.04) | (0.07) | (0.06) | (0.04) | (0.04) |
| | | | | | | | | |
| Control mean | 56.16 | 0.00 | 2.98 | -0.00 | 2.66 | 2.39 | -0.00 | -0.00 |
| Control SD | 79.29 | 1.00 | 1.16 | 1.00 | 1.10 | 1.08 | 1.00 | 1.00 |
| *p*-value (all three equal) | 0.886 | 0.953 | 0.295 | 0.551 | 0.192 | 0.571 | 0.434 | 0.223 |
| Observations | 5,379 | 5,379 | 1,608 | 5,379 | 2,199 | 2,002 | 5,345 | 5,379 |

Note: The endline was conducted about 18-22 months after first transfers were received in Liberia and 21-25 months in Malawi. Regressions include baseline measurement, strata fixed effects, and indicator for market access treatment. Monetary outcomes are in USD and Winsorized at the 99th percentile. Standard errors clustered at the village level in parentheses. ***, **, and * represent significance at 1%, 5%, and 10%, respectively.

[a] Includes only women and those for whom IPV was measured in face-to-face interviewing.

The index of social capital measures self-reported perceptions on whether the household could depend upon or be depended upon by friends or relatives for food or financial help in response to a hypothetical shock, such as those related to the loss of a family member, loss of income, flood, drought, hunger etc. We find an improvement of 0.08 s.d. in the index for Liberia, the effect for Malawi, although positive, is statistically insignificant. We examine subcomponents in Table D5. In Liberia, the $750 cash group indicates that they are more likely to be able to depend on others, and also have others depend on them. Other cash groups show no different with control. In Malawi, while there are no effects of cash on depending on others, there is an effect in the $250 cash group of relatives being able to depend on them.

The public goods contribution index measures the average of labor, cash, and in-kind contributions to community service activities in the previous 12 months. We find a 0.09 s.d. effect for Liberia, but none in Malawi. We look at each component in Table D6. While the effects are by and large positive, they are imprecisely estimated. In Liberia, the $500 cash group increased cash contributions by 5pp from a base of 0.10, at 10% significance.

We examine a final secondary outcome - child anthropometrics, which we do not report as a summary measure in Table 4, but directly examine subcomponents in Table D7. As is standard practice, anthropometric measures were taken only for children under the age of 5, and we measured this only in Malawi in response to a special request by the USAID country mission. There is no significant impact of cash on height for age, weight for age, or middle upper-arm circumference (MUAC) on age. There does appear to be a linear of effect of cash on height age with cash, but again, it is not significant. There is no systematic relationship of point estimates for the effects of cash on the other measures. Further, we also examine if there is heterogeneity in effects by the age of the child at first transfer (Table D8). We define 5 different ages for this analysis: ages 0-2 are self-explanatory, while ages -2 and -1 refer to the child being born respectively 2 and 1 years after the first transfer was made. We find no differential impact on anthropometrics by the age of the child at transfer receipt. However,

we would not make much of the lack of effects here as these outcomes are difficult to move and the sample size is tiny, made tinier still when we test separately for effects for each age bracket.

## 3.5   Sub-treatments

While the average transfer amount was $500, as described earlier, there were two additional components to the cash transfer experiment. First, villages were randomized into one of three cash transfer amounts. Second, in Liberia, individual households were randomly assigned to either a lump sum or a quarterly payment.[23] We describe the results for these 2 subtreatments in the following subsections.

**Cash transfer amount**

As indicated earlier, Table 2 and Table 3 show treatment effects by transfer size (in the endline data). In Table 2, recall that only 2 outcomes are significant in Liberia (food security and non-food expenditure) and 1 in Malawi (food security). Of these, we see, unsurprisingly, that effects are generally larger for the larger transfer amounts. While differences are often not statistically significant, the pattern seems fairly clear.

Turning to other outcomes in Table 3, we see a roughly positive, if somewhat non-monotone effect of cash transfer size on improvements in non-land wealth. In Malawi, the smallest transfer does not improve non-land wealth, but the other sizes do with increasing effect. The effect sizes in Liberia are significant for all transfer sizes, though the two highest transfer amounts yield similarly large effects when compared with control.

For IPV and psychological well-being in Columns 2 and 3, we see interesting differences. For IPV in Liberia and the pooled sample, the effects are relatively consistent across transfer sizes, and significantly negative. However, for Malawi, we see no effect at any transfer

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[23]In Malawi, we attempted an additional randomization, in which the cash transfers were randomly assigned to the female or head male in the household. Our understanding from GD is that implementation/data issues make it impossible to reconstruct this randomization.

amount. For psychological well-being, the positive effects of cash are present at all transfer amounts in Liberia, with modest increases by transfer size. In Malawi, effects are much more monotone, increasing from 0.04 standard deviations at $250 to 0.16 standard deviations at $750. For resilience, we don't see a clear pattern in Liberia, but do see evidence of monotonely increasing effects in Malawi.

**"Lump-sum" vs. "flow" disbursement (Liberia only)**

In Liberia, the cash disbursement schedule was randomized between lump-sum and flow. The randomization was at the individual level and performed in the field by GD. In order to identify which household in our survey sample in treatment villages received lump-sum or flow payments, we obtained enrollment data from GD and matched it with our database using names and contacts.[24] The matching rates were about 87%, but since being matched is likely endogenous, we restrict the analysis in this section to only those households who were matched. Because matching did not occur in control villages, we exclude the control group (and thus only compare lump sum to flow, and do not make comparisons directly to the control).

We check the balance between lump-sum and flow groups (conditional on being matched) in Table E1.[25] In the Table, Columns 1-2 and 4-5 display the mean and standard deviations for each group, and Columns 3 and 6 report the p-values for the mean difference between lump-sum and flow within each study Wave. In Wave 1, there is one variable (food expenditure) for which the baseline difference is significant at 5%. In Wave 2, two variables have differences significant at 10% (household size and transfers received). Despite we find some evidence for imbalance in this very set of outcomes, there is no a priori reason that the lump-sum and flow groups are systematically different within the matched sample.

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[24]For Wave 2, in order to maximize statistical power, we randomly assigned the payment schedule ensuring balance within village. Our survey team left chalk marks and tokens with different color indicating lump-sum or flow, and these were communicated to GD before they visited the treatment villages for enrollment.

[25]In Wave 1, 151 of the matched households received lump-sum transfers and 153 were in flow payments; in Wave 2, 393 households were in the lump-sum group and 420 in the flow.

Table E2 shows the first stage of the randomization. While about 10% of those sampled for control were enrolled into lump sum, we still see a first stage of 79 percentage points. We use intent to treat throughout the analysis, and results should be interpreted relative to the first stage.

To analyze effects, we run specifications similar to those in the main text. For the phone surveys, similarly to Equation (1), we run

$$Y_{ivst} = \sum_t \beta_t Flow_{vs} D_{tvs} + \gamma Y_{ivs0} + \delta MA_v s + \phi_m + \lambda_s + \varepsilon_{ivst}, \tag{3}$$

where $Flow$ is a binary variable equal to 1 if the household was assigned to receive transfers in flow and 0 if in lump-sum. For the endline, similarly to Equation (6), we run

$$Y_{ivs} = \beta Flow_{vs} + \delta MA_{vs} + \gamma Y_{ivs0} + \lambda_s + \varepsilon_{ivs} \tag{4}$$

Standard errors are clustered at the individual level, the level of randomization.

Results are presented in Appendix E. In Figure E1-Figure E4, we find no significant differences between the lump-sum and flow groups, at any point of our phone survey data collection. In Table E3 and Table E4, we report the effects for the outcomes measured at endline. While we find no significant effect on any of the outcomes, one notable result is non-land wealth (Column 1, Table E4). In magnitude, treatment households that received transfers in quarterly payments reported $52-76 less (insignificant), compared to those that received lump-sum transfers who reported $217 on average in Wave 1 and $571 in Wave 2. While the differences between the two groups are not statistically significant, this suggests that receiving transfers in bulk helped households in accumulating assets.

**Market access intervention**

Table 5 shows the effect of the market access intervention. Please note that the Liberia results are for Wave 1 only as the intervention could not be implemented during Wave 2 due

to the pandemic. There was a clear increase in the amount spent on agricultural inputs in Malawi due to the cash treatment - we find that the total value of inputs increased $2.21 (or 16%). While the combined effect of cash and market access is consistently positive in Malawi, these effects are underpowered. On the other hand, there were no effects in Liberia. This may be explained by Liberia's well-documented lack of access to agricultural input retailers, thereby making it difficult for farmers to purchase inputs.[26] Overall, we conclude that the cash transfers were successful in increasing the amount spent on agricultural inputs in the country with greater access to those inputs.

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[26]See Aggarwal et al. (2021b) for evidence on the role of input market access on input adoption.

Table 5: Market Access on Agricultural Input (Endline Survey)

| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) |
|---|---|---|---|---|---|---|---|---|---|
| | Purchases of agricultural inputs in the past season: | | | | | | | | Value of farmtools at endline |
| | Fertilizer | | Seeds | | Pesticides | | Total | | |
| | =1 if any | Amount (USD) | =1 if any | Amount (USD) | =1 if any | Amount (USD) | =1 if any | Amount (USD) | |
| **Panel A. Liberia** | | | | | | | | | |
| Cash | 0.03 | 1.78 | 0.02 | 0.95* | 0.02 | 0.77 | 0.03 | 3.52 | 2.80** |
| | (0.03) | (2.53) | (0.03) | (0.53) | (0.03) | (0.55) | (0.04) | (3.23) | (1.12) |
| Market Access | 0.11 | 9.16 | 0.08 | 2.16** | 0.08 | 2.05* | 0.11 | 13.50 | 2.31 |
| | (0.07) | (7.65) | (0.05) | (0.95) | (0.06) | (1.23) | (0.08) | (9.48) | (1.55) |
| Cash × Market Access | -0.19** | -10.58 | -0.03 | -2.50** | -0.12* | -2.78** | -0.14 | -15.97 | -3.17 |
| | (0.08) | (8.05) | (0.07) | (1.12) | (0.07) | (1.36) | (0.09) | (10.01) | (2.20) |
| | | | | | | | | | |
| Pure control mean | 0.10 | 3.52 | 0.10 | 0.55 | 0.07 | 0.55 | 0.20 | 4.62 | 8.49 |
| Pure control SD | 0.29 | 21.61 | 0.29 | 3.67 | 0.25 | 3.32 | 0.40 | 23.87 | 9.53 |
| Observations | 728 | 728 | 728 | 728 | 728 | 728 | 728 | 728 | 728 |
| | | | | | | | | | |
| **Panel B. Malawi** | | | | | | | | | |
| Cash | 0.03* | 1.97** | 0.02 | 0.21 | -0.02 | 0.01 | 0.03** | 2.21*** | 0.53 |
| | (0.01) | (0.80) | (0.03) | (0.13) | (0.01) | (0.02) | (0.01) | (0.84) | (0.54) |
| Market Access | 0.03 | 0.99 | -0.01 | -0.13 | -0.00 | 0.01 | 0.03 | 0.89 | -0.13 |
| | (0.02) | (1.11) | (0.03) | (0.17) | (0.02) | (0.03) | (0.02) | (1.18) | (0.67) |
| Cash × Market Access | -0.02 | 1.28 | 0.01 | 0.28 | 0.02 | 0.02 | -0.02 | 1.54 | 0.69 |
| | (0.03) | (1.51) | (0.04) | (0.25) | (0.03) | (0.05) | (0.02) | (1.63) | (0.98) |
| | | | | | | | | | |
| Pure control mean | 0.92 | 14.99 | 0.38 | 1.29 | 0.09 | 0.08 | 0.93 | 16.37 | 9.54 |
| Pure control SD | 0.28 | 16.38 | 0.49 | 2.81 | 0.28 | 0.51 | 0.26 | 17.53 | 10.15 |
| Observations | 2,784 | 2,784 | 2,784 | 2,784 | 2,784 | 2,784 | 2,784 | 2,784 | 2,784 |
| | | | | | | | | | |
| **Panel C. Pooled** | | | | | | | | | |
| Cash | 0.03** | 2.00** | 0.02 | 0.36** | -0.01 | 0.17 | 0.03** | 2.55*** | 1.00** |
| | (0.01) | (0.84) | (0.02) | (0.15) | (0.01) | (0.12) | (0.01) | (0.95) | (0.49) |
| Market Access | 0.05** | 2.54 | 0.01 | 0.37 | 0.02 | 0.43 | 0.04* | 3.36 | 0.39 |
| | (0.02) | (1.91) | (0.03) | (0.25) | (0.02) | (0.28) | (0.02) | (2.31) | (0.63) |
| Cash × Market Access | -0.06** | -1.29 | -0.00 | -0.31 | -0.00 | -0.55* | -0.05* | -2.18 | -0.11 |
| | (0.03) | (2.16) | (0.04) | (0.32) | (0.03) | (0.30) | (0.03) | (2.59) | (0.90) |
| | | | | | | | | | |
| Pure control mean | 0.74 | 12.53 | 0.32 | 1.13 | 0.08 | 0.18 | 0.77 | 13.84 | 9.32 |
| Pure control SD | 0.44 | 18.25 | 0.47 | 3.03 | 0.27 | 1.61 | 0.42 | 19.66 | 10.02 |
| Observations | 3,512 | 3,512 | 3,512 | 3,512 | 3,512 | 3,512 | 3,512 | 3,512 | 3,512 |

Note: The endline was conducted about 18-22 months after first transfers were received in Liberia and 21-25 months in Malawi. Regressions include baseline measurement and strata fixed effects. Monetary outcomes are in USD and Winsorized at the 99th percentile. Standard errors clustered at the village level in parentheses. ***, **, and * represent significance at 1%, 5%, and 10%, respectively.
[a] Includes only women and those for whom IPV was measured in face-to-face interviewing.

# 4 Discussion

In this section, we discuss several important analyses which would primarily affect the interpretation, or the external validity of our results. In particular, there are 2 main concerns

about using unconditional cash transfers as an anti-poverty tool: (a) in regions with supply constraints, large infusions of cash may put upward pressure on prices, hurting the wellbeing of non-recipients and reducing the real value of the transfer for recipients, and (b) cash transfers may have positive and negative spillover effects on non-beneficiaries through various channels, such as by increasing their income through a local multiplier or by reducing their psychological wellbeing by making them relatively poorer.

## 4.1 Prices

Large cash transfers have the potential to change local prices, by affecting aggregate demand. This study was designed in a way to minimize the possibility of price effects. In particular, randomization was spread out over a wide enough geographic area that only a small proportion of the overall population was treated. In both countries, most purchases and sales are made not in local villages, but in larger market centers that draw from many villages. In Liberia, we estimate that about 13% of the overall population was treated; in Malawi, we estimate that it was about 7%. These market catchment areas are also linked to the broader national economies in both countries (and in the case of Malawi, the global market via a close border with Mozambique). Another reason to expect minimal price effects is that we do observe measured increases in expenditures in Liberia, and in Malawi any expenditure results have died out within about 8 months.

Nevertheless, we set up data collection to address this issue. We collected monthly price data in every treatment market, starting just before cash was disbursed. While the location of the program itself was not random, we selected comparison markets from a list of markets obtained from World Food Programme in Liberia and 2018 Census in Malawi. In total, we collected prices in 23 treatment markets in Liberia, and 57 comparison; in Malawi, it was 10 treatment and 85 comparison. In each market, we enrolled vendors of a list of items that were selected based on food expenditures in the most recent LSMS in each country (the

HIES for Liberia and LSMS in Malawi)[27] For each item, we enrolled at least 2 vendors in each market (so that we would still have a price if one vendor missed the phone call), and called each vendor once a month. Vendors received a small amount of airtime credit (worth about $0.50-$1 per call) for answering the survey. In the survey, we asked about all items on the list that the vendor sold herself, as well as prices of items she did not sell. We use these "indirect" prices only in cases in which the direct price is entirely missing.

We estimate a difference-in-difference specification to measure the impact of the cash transfer:

$$\log(Price)_{i,m,t} = \beta Cash_m + \sum_t \phi_t Month_t + \sum_t \theta_t Cash_m \times Month_t + \lambda_{i,m} + \varepsilon_{i,m,t} \quad (5)$$

where the dependent variable is the log price of item $i$ in market $m$ and month $t$. $Cash_m$ is an indicator variable for market treatment status which is equal 1 for markets in treatment area and 0 for comparison markets. $Month_t$ is a month fixed effect and $\lambda_{i,m}$ captures market-by-item fixed effects. $\theta_t$ is the parameter of interest which measures the dynamic effects of cash over time (against two different "control" groups, described below). Standard errors are clustered at market level.

We would ideally have markets within the treatment area that can be compared with identical markets in a control area that is not integrated economically with the treatment. Whether such a control area exists depends on the nature of trade within the region, which itself is unobserved. To account for these factors we divide the control markets into "Neighboring" markets and "Distant" markets, based on the median distance to the nearest treatment market.[28] If a comparison market is closer than the median distance, it is classified as a "Neighboring" market, otherwise a "Distant" market. Since neighboring markets may be

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[27] The list of items for Liberia are cassava, cassava flour, imported rice, okra, onion, palm oil, and salt. The list of items for Malawi are beans, groundnut, maize flour, maize kernel, onion, salt, sugar, sweet potato, tomato, and unpacked rice. Altogether, these outcomes account for 77.70% of total food expenditure in Liberia and 84.0% in Malawi at the baseline.

[28] The median distance to the nearest treated market is 48 km in both Liberia and Malawi, equivalent to a 10 hour walk.

more integrated with the treatment markets, we would expect any price differences resulting from the cash transfers to be more apparent when comparing treatment with distant control markets.

In Appendix F, we present six figures to illustrate the impacts of the cash transfer on prices for both Liberia and Malawi, respectively. Specifically, we present a raw price plot of prices of primary grains and vegetables, another of staple grains (rice in Liberia, and maize in Malawi). For these commodities/groups, we also present regression estimates for differences across treatment, nearby, and distant markets over this same period. We do this for Wave 1 in Liberia, Wave 2 in Liberia, and Malawi, separately.

Overall, we find little to no evidence of increased prices due to the cash transfers across a wide set of goods. For Liberia, Figure F1 and Figure F3 show the simple average change in weighted prices after the cash transfer, relative to the pre-transfer period. While the price index was relatively higher in treatment markets as compared to both neighboring and distant control markets, there is no change after the introduction of the cash transfers, and this difference is not statistically significant at conventional levels (Figure F2 and Figure F4). The same result applies to staple grains in both Wave 1 and Wave 2. Overall, prices remain fairly stable throughout the entire period, and follow similar patterns in treatment and control markets.

The situation is slightly different for Malawi: prices for select and staple food items increase significantly between July 2019 and February 2020, the period of time when the cash transfer took place (Figure F5). This also coincided with the timing of severe floods and production shortfalls in Malawi, which led to higher than average prices, especially for maize (FEWS-NET 2020). However, when evaluating differences across treatment and the two control areas, there is no evidence of significant price differences for the index of select crops or staple crops (Figure F6). Overall, while there were price increases in all markets coincident with the period of the cash transfer, these were not differential in treatment and control villages. Thus, unless markets are perfectly integrated in Malawi, the evidence does

not support that price-spillovers drive the differences in food security across treatment and control villages.

## 4.2 Spillover effects

An important consideration in the context of cash transfers, for both measurement and policy, is that their efficacy can crucially depend on the magnitude and nature of spillover effects. For example, cash transfers could affect non-beneficiary households, either positively (via channels such as the direct sharing of transfers, or via local multiplier effects such as employing non-treatment households as workers),[29] or negatively (via channels such as increasing local prices, or because the transfers generate envy).[30] We now turn to evaluating these spillover effects.

First, we have already shown data on transfers reported by the beneficiaries themselves (which we showed in Table 2 for the endline and in Figure 4 for the phone surveys). We observe no evidence of an increase in transfers sent for Malawi, and an increase in both transfers sent and received for Liberia, leaving net transfers unchanged.[31]

Second, we are also able to analyze effects on control households directly. In Malawi, and in Wave 2 in Liberia, we randomly assigned the intensity of treatment villages. In each country, we first identified clusters of villages, and then randomly assigned each cluster to either high-intensity, low-intensity, or pure control.[32] We use this design to estimate spillovers using the following regression:

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[29]For example, see Angelucci and De Giorgi (2009) and Egger et al. (2019).

[30]For example, see Filmer et al. (forthcoming) and Haushofer et al. (2019).

[31]The positive effects on the amount of transfers received are counter-intuitive. While we do not have any evidence to support this, we speculate that this could happen if the transfers cause a rewiring of informal risk-sharing networks (for example, see evidence from Comola and Prina (2021) in the context of access to savings accounts).

[32]In Malawi, we used an existing administrative unit "group village." Out of 104 group villages in our study sample, 28 were assigned to high-intensity, 42 to low-intensity, and 34 to pure control. In Liberia, there is no comparable administrative unit, so we identified geographical clusters of villages through a hierarchical clustering exercise, based on average distances between housing structures. While it was not possible to stratify the sample in this way for Wave 1, we were able to do this for Wave 2 villages, assigning 34 to high-intensity (86% treatment), 22 to low-intensity (27% treatment), and 14 to pure control (0% treatment).

$$Y_{icvs} = \beta Treat_c + \delta Cash_{vs} + \mu Treat_c + \gamma Y_{ivs0} + \lambda_s + \varepsilon_{ivs} \tag{6}$$

where the added subscript $c$ indicated cluster, and errors are clustered at the cluster level. $Treat_c$ is an indicator for being a control household in a treated cluster.[33] Note that all treated villages are, by definition, located in treated clusters.

Results are presented in Table 6. In Columns 1-2, here too we see no evidence of increase in transfers. The point estimates on transfers received, and transfers sent, are both negative (and significant at 10%) in Malawi, and negative but insignificant in Liberia. Columns 3-6 show the four main outcomes discussed in this paper, we find no statistically significant effects on any of them. However, it should be noted that because of the small number of clusters and the fact that the analysis does not include the first wave in Liberia, the confidence intervals include some fairly substantial values (for example, the lower bound on food security is -0.25 SDs in Liberia and -0.10 standard deviations in Malawi; there is a similar pattern for most variables).

Columns 7-8 show a few other outcomes that have been shown to have effects in other work (IPV, and psychological well-being). We see some weak evidence of effects. In particular, psychological well-being is 0.16 standard deviations higher in Liberia, and the coefficient on IPV is negative and borderline significant as well. We interpret these results as most likely consistent with statistical noise, but it is hard to determine conclusively.

---

[33]We pool the high and low intensity clusters for this analysis, since sample sizes in each alone are small and we observe no statistically significant differences in outcomes.

| | (1)<br>Transfers<br>Sent<br>(past month) | (2)<br>Transfers<br>Received<br>(past month) | (3)<br>Food<br>Security[a]<br>(past year) | (4)<br>Food<br>Expend<br>(past month) | (5)<br>Non-food<br>Expend<br>(past month) | (6)<br>Non-ag<br>Income<br>(past month) | (7)<br>Any<br>IPV[b]<br>(past year) | (8)<br>Psycho<br>Well-being<br>(past 2 weeks) |
|---|---|---|---|---|---|---|---|---|
| **Panel A. Liberia** | | | | | | | | |
| Treat cluster | -1.16 | -1.72 | -0.09 | -0.46 | -2.88 | -0.15 | -0.08 | 0.16* |
| | (0.89) | (1.19) | (0.08) | (1.59) | (2.54) | (2.34) | (0.05) | (0.08) |
| Treat cluster × Cash village | -1.28 | -1.76* | 0.24*** | -0.18 | 5.59** | 2.50 | -0.14*** | 0.45*** |
| | (0.81) | (1.06) | (0.08) | (1.39) | (2.28) | (1.82) | (0.05) | (0.08) |
| | | | | | | | | |
| Pure control mean | 3.31 | 4.04 | 0.05 | 29.61 | 34.80 | 8.09 | 0.40 | -0.03 |
| Pure control SD | 16.90 | 19.55 | 0.97 | 22.03 | 37.36 | 19.79 | 0.49 | 1.04 |
| Observations | 1,867 | 1,867 | 1,867 | 1,867 | 1,867 | 1,867 | 860 | 1,867 |
| **Panel B. Malawi** | | | | | | | | |
| Treat cluster | -0.02 | -0.44* | 0.02 | 1.05 | 0.17 | -0.24 | 0.01 | 0.06 |
| | (0.09) | (0.25) | (0.06) | (0.66) | (0.75) | (1.16) | (0.02) | (0.06) |
| Treat cluster × Cash village | 0.00 | -0.07 | 0.13** | 1.00* | 0.65 | 0.77 | 0.01 | 0.13** |
| | (0.07) | (0.26) | (0.05) | (0.55) | (0.63) | (1.07) | (0.02) | (0.05) |
| | | | | | | | | |
| Pure control mean | 0.46 | 1.22 | -0.01 | 9.08 | 12.08 | 9.59 | 0.19 | -0.04 |
| Pure control SD | 1.96 | 4.89 | 0.99 | 9.80 | 14.40 | 21.56 | 0.39 | 1.03 |
| Observations | 2,784 | 2,784 | 2,784 | 2,784 | 2,784 | 2,784 | 1,829 | 2,784 |
| **Panel C. Pooled** | | | | | | | | |
| Treat cluster | -0.45 | -0.93* | -0.03 | 0.47 | -1.16 | -0.21 | -0.01 | 0.09* |
| | (0.35) | (0.49) | (0.05) | (0.74) | (1.12) | (1.18) | (0.02) | (0.05) |
| Treat cluster × Cash village | -0.50 | -0.73* | 0.18*** | 0.57 | 2.65*** | 1.40 | -0.03* | 0.26*** |
| | (0.31) | (0.44) | (0.04) | (0.63) | (0.97) | (0.96) | (0.02) | (0.05) |
| | | | | | | | | |
| Pure control mean | 1.49 | 2.25 | 0.01 | 16.55 | 20.34 | 9.04 | 0.26 | -0.04 |
| Pure control SD | 10.39 | 12.48 | 0.98 | 18.30 | 27.54 | 20.94 | 0.44 | 1.03 |
| Observations | 4,651 | 4,651 | 4,651 | 4,651 | 4,651 | 4,651 | 2,689 | 4,651 |

Note: The endline was conducted about 18-22 months after first transfers were received in Liberia and 21-25 months in Malawi. Regressions include baseline measurement, strata fixed effects, and indicator for market access treatment. Monetary outcomes are in USD and Winsorized at the 99th percentile. Standard errors clustered at the village level in parentheses. ***, **, and * represent significance at 1%, 5%, and 10%, respectively.
[a] Food Security Index is standardized z-score of HDDS, FCS, HHS (negatively weighted), and FIES (negatively weighted), using inverse covariance weighting (Anderson 2008) relative to the control mean and SD in each country.
[b] Includes only women and those for whom IPV was measured in face-to-face interviewing.

In sum, we find little evidence of spillovers, positive or negative. This is in contrast to other work, for example, Angelucci and De Giorgi (2009), who find that cash transfers under the Oportunidades program increased consumption of the control households, which the authors attribute to sharing. One possible explanation for this contrast is due to program design: since Oportunidades had within-village targeting, kinship ties and the pressures to

share may have been stronger. Similarly, Haushofer and Shapiro (2018), another study that uses within-village randomization, finds that non-beneficiaries in treatment villages are more likely to have lower consumption, likely because they sell off their productive assets. The transfers that we evaluate, on the other hand, were universal wihin village.

# 5  Subgroup analysis requested by USAID

In this section, we show the effects on primary outcomes discussed in Section 3.1 by subgroups per request of USAID. The results are shown in Appendix G. Each table corresponds to each of the 11 primary outcomes in Table 2 and Table 3. In each table, Columns 2-7 show effects for each subgroup, and the pooled effects for the entire sample (already reported in main tables) are in Column 1 for comparison.

Overall, we find little consistent heterogeneity across subgroups. The patterns are similar across tables, so we take food security for example. In Table G1, while the effect for the entire sample in Liberia is 0.31 SD, the effects for the subgroups range 0.24-0.34 SD, all within the 95% confidence interval of the estimate for the entire sample. The subgroup of households which engaged in charcoal production are very small in number (40 observations), and therefore the estimate is very noisy. In Malawi, the effects for the subgroups range 0.11-0.15 SD, all of which again fall well within the 95% confidence interval of the entire-sample estimate of 0.12 SD.

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# Appendix A

Figure A1: Timeline of Cash Transfer Disbursements and Survey Activities
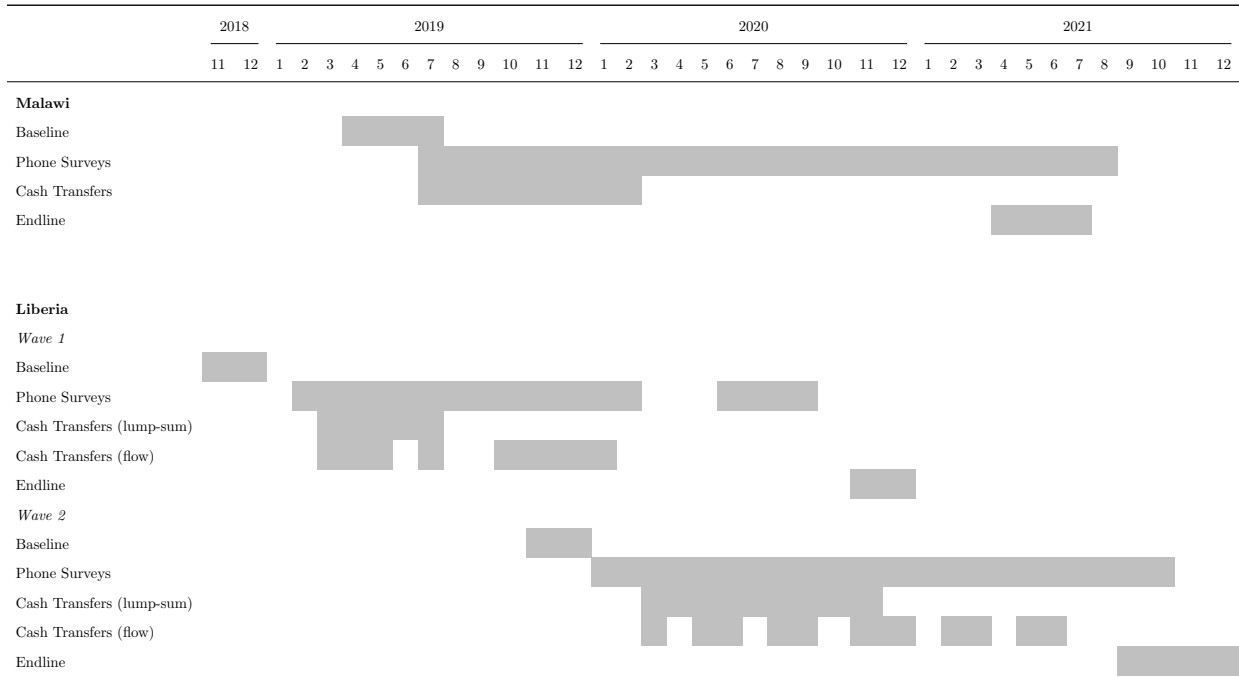


Figure A2: Map of Study Villages and Markets in Liberia and Malawi

(a) Liberia                    (b) Malawi
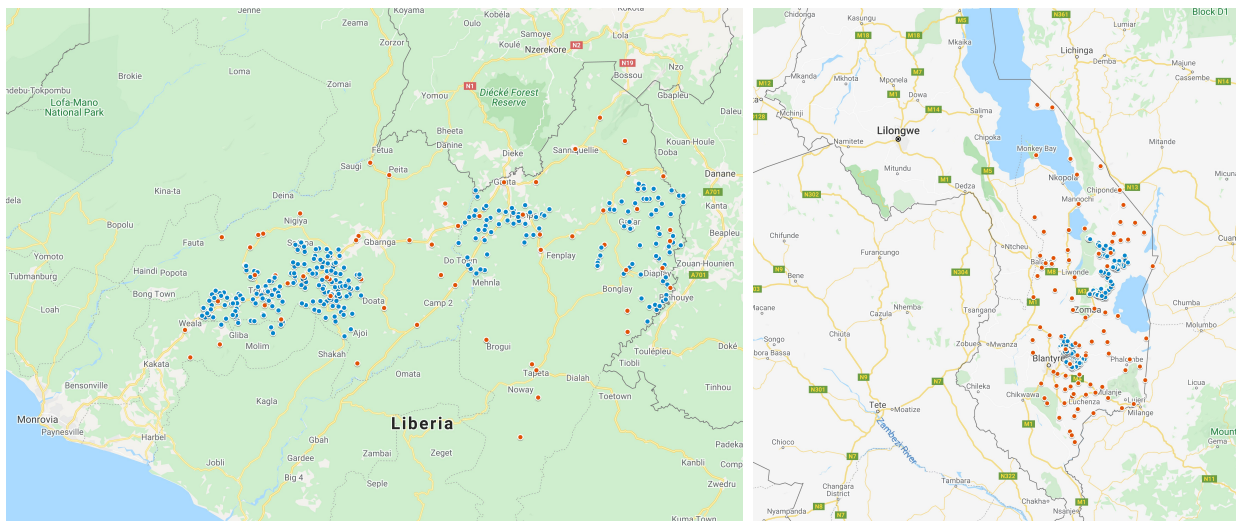


Note: Blue dots refer to villages, and orange dots markets. For Liberia, there are 300 villages and 80 markets. For Malawi, there are 300 villages and 95 markets.

Figure A3: Effects on Large Purchases
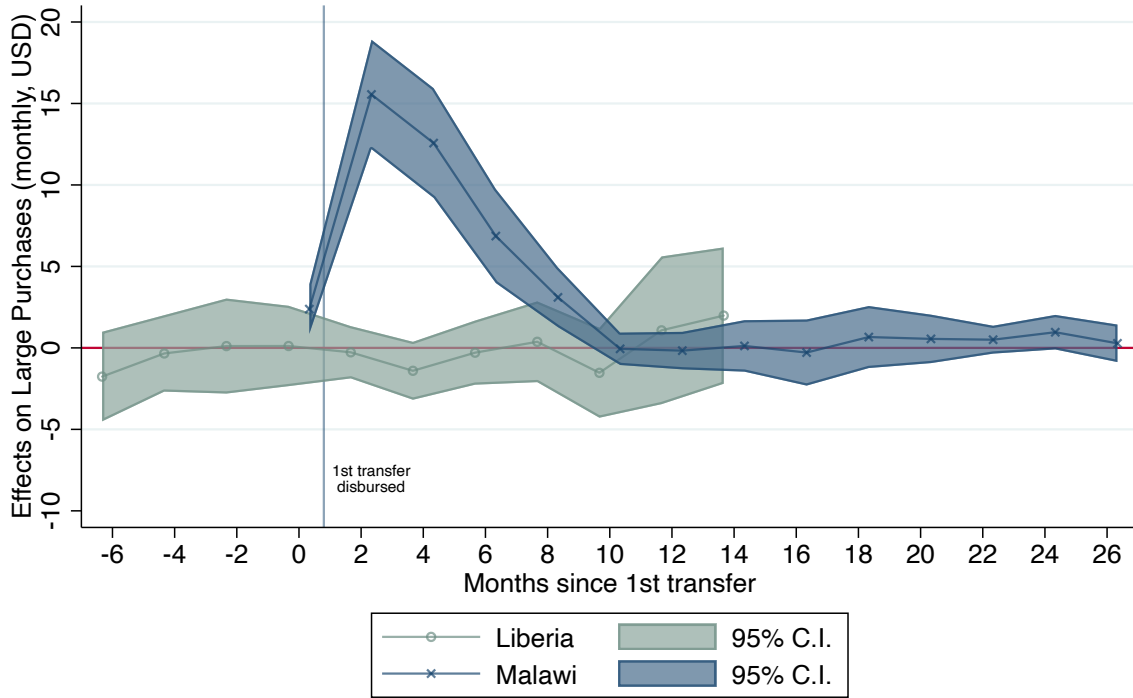
Note: Regressions include baseline measurement of outcome and strata fixed effects. Standard errors clustered at village level.First transfer for each treatment household was made across July-October 2019 for Malawi and March-September 2020 for Liberia (Wave 2). Sample includes 596 households in Malawi and 358 in Liberia (Wave 2).

# Figure A4: Effects on Health Shocks and Coping

## (a) Health Event (=1 if any HH member sick in past month)
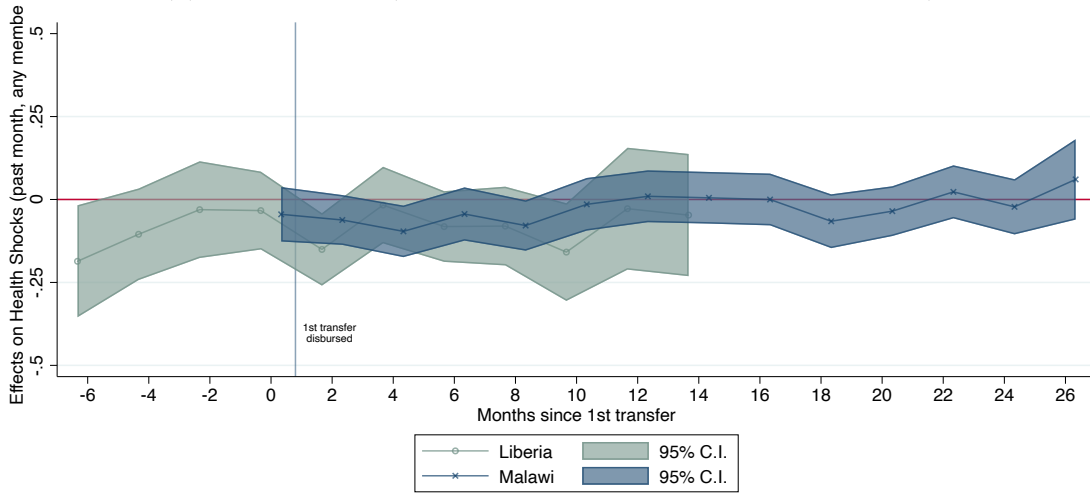


## (b) Delayed Treatment (conditional on any HH member being sick)
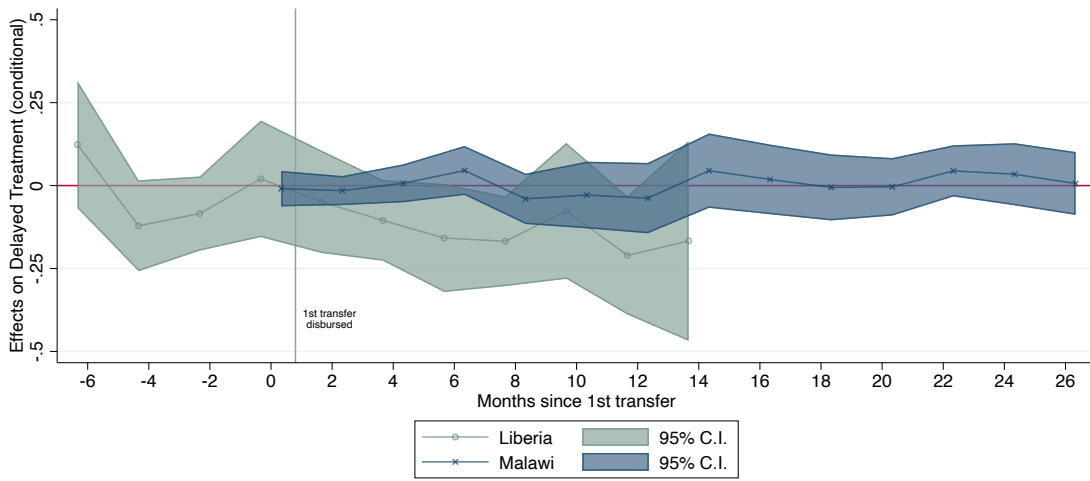


## (c) Medical Treatment Expenditure (unconditional)
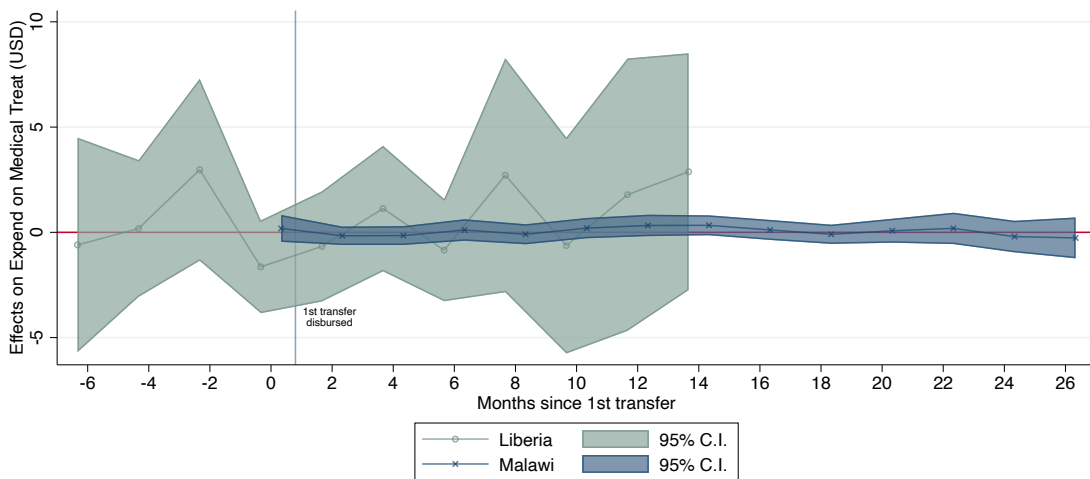


Note: Regressions include baseline measurement of outcome and strata fixed effects. Standard errors clustered at village level.First transfer for each treatment household was made across July-October 2019 for Malawi and March-September 2020 for Liberia (Wave 2). Sample includes 596 households in Malawi and 358 in Liberia (Wave 2).

Table A1: Attrition in Endline Survey

| | (1) | (2) | (3) | (4) |
|---|---|---|---|---|
| | =1 if completed endline survey | | =1 if completed IPV survey at endline[a] | |
| | Liberia | Malawi | Liberia | Malawi |
| Cash | -0.00 | 0.01 | 0.02 | 0.04* |
| | (0.01) | (0.01) | (0.02) | (0.02) |
| | | | | |
| Control mean | 0.96 | 0.94 | 0.69 | 0.66 |
| Overall mean | 0.96 | 0.95 | 0.70 | 0.68 |
| Observations | 2,715 | 2,944 | 2,595 | 2,784 |

Note: Regressions include strata fixed effects. Standard errors clustered at village level in parentheses.
[a] Sample restricted to female respondents.

Table A2: Attrition in Phone Surveys

| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) | (11) | (12) | (13) | (14) | (15) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | =1 if completed survey in following survey round | | | | | | | | | =1 if | % of |
| | 1st | 2nd | 3rd | 4th | 5th | 6th | 7th | 8th | 9th | 10th | 11th | 12th | 13th | ≥ 1R | rounds |
| **Panel A. Malawi** | | | | | | | | | | | | | | | |
| Cash | 0.01 | -0.03 | -0.03 | 0.01 | -0.03 | -0.02 | -0.04* | -0.03 | -0.02 | 0.04 | -0.00 | -0.00 | -0.00 | | -0.01 |
| | (0.01) | (0.02) | (0.03) | (0.02) | (0.02) | (0.02) | (0.02) | (0.02) | (0.03) | (0.03) | (0.03) | (0.03) | (0.03) | | (0.02) |
| | | | | | | | | | | | | | | | |
| Control mean | 0.97 | 0.95 | 0.87 | 0.91 | 0.93 | 0.95 | 0.96 | 0.94 | 0.89 | 0.84 | 0.86 | 0.80 | 0.62 | 1.00 | 0.88 |
| Overall mean | 0.97 | 0.94 | 0.85 | 0.91 | 0.92 | 0.93 | 0.94 | 0.93 | 0.87 | 0.86 | 0.86 | 0.80 | 0.61 | 1.00 | 0.88 |
| Observations | 596 | 596 | 596 | 596 | 596 | 596 | 596 | 596 | 596 | 596 | 596 | 596 | 596 | 596 | 596 |
| | | | | | | | | | | | | | | | |
| **Panel B. Liberia (Wave 2)** | | | | | | | | | | | | | | | |
| Cash | -0.01 | -0.01 | -0.03 | -0.05 | -0.04 | 0.02 | -0.03 | -0.07 | 0.02 | | | | | -0.06* | -0.02 |
| | (0.05) | (0.05) | (0.05) | (0.05) | (0.05) | (0.05) | (0.05) | (0.05) | (0.05) | | | | | (0.04) | (0.04) |
| | | | | | | | | | | | | | | | |
| Control mean | 0.75 | 0.68 | 0.70 | 0.71 | 0.64 | 0.60 | 0.55 | 0.48 | 0.45 | | | | | 0.90 | 0.62 |
| Overall mean | 0.74 | 0.68 | 0.69 | 0.69 | 0.62 | 0.62 | 0.54 | 0.44 | 0.46 | | | | | 0.87 | 0.61 |
| Observations | 416 | 416 | 416 | 416 | 416 | 416 | 416 | 416 | 416 | | | | | 416 | 416 |

Note: Each survey round is two months, where half of the sample is called in the even month and the other in the odd month. Regressions include strata fixed effects. Standard errors clustered at village level in parentheses.

Table A3: Effects Measured in Phone Surveys, Pooled across all Rounds

| | (1)<br>Food<br>Security[a]<br>(past year) | (2)<br>Food<br>Expend<br>(past month) | (3)<br>Non-food<br>Expend<br>(past month) | (4)<br>Non-ag<br>Income[b]<br>(past month) | (5)<br>Transfers<br>Sent<br>(past month) | (6)<br>Transfers<br>Received<br>(past month) | (7)<br>Savings<br>Balance | (8)<br>Outstanding<br>Loan |
|---|---|---|---|---|---|---|---|---|
| **Panel A. Liberia** | | | | | | | | |
| *Pooled cash treatment:* | | | | | | | | |
| Cash | 0.17*** | 0.57 | 7.31*** | -0.03 | 0.57** | 0.16 | 0.47 | -0.01 |
| | (0.05) | (0.95) | (2.66) | (0.80) | (0.28) | (0.47) | (0.63) | (0.74) |
| *Individual treatments by cash amount:* | | | | | | | | |
| Cash 250 | 0.04 | -0.56 | 0.70 | -0.47 | -0.09 | -0.58 | -0.68 | -0.50 |
| | (0.07) | (1.46) | (3.82) | (1.03) | (0.32) | (0.59) | (0.73) | (0.91) |
| Cash 500 | 0.29*** | 1.22 | 8.33** | 1.65 | 0.72* | 0.42 | 1.71* | 0.03 |
| | (0.08) | (1.19) | (3.51) | (1.08) | (0.43) | (0.70) | (0.97) | (1.12) |
| Cash 750 | 0.18** | 0.95 | 12.64*** | -1.49 | 1.05** | 0.59 | 0.20 | 0.41 |
| | (0.07) | (1.49) | (4.16) | (1.13) | (0.47) | (0.62) | (0.88) | (1.04) |
| | | | | | | | | |
| Control mean | 0.28 | 21.77 | 33.47 | 8.71 | 2.54 | 4.64 | 4.12 | 4.51 |
| Control SD | 0.87 | 17.00 | 37.61 | 14.18 | 5.35 | 8.54 | 13.80 | 15.62 |
| No. of respondents | 497 | 497 | 497 | 497 | 497 | 497 | 497 | 497 |
| Observations | 2,925 | 2,925 | 2,925 | 2,925 | 2,925 | 2,925 | 2,925 | 2,925 |
| **Panel B. Malawi** | | | | | | | | |
| *Pooled cash treatment:* | | | | | | | | |
| Cash | 0.23*** | 2.98*** | 9.86*** | 0.27 | 0.19** | -0.03 | 2.15*** | -0.90 |
| | (0.04) | (0.70) | (1.54) | (0.65) | (0.08) | (0.20) | (0.82) | (0.86) |
| *Individual treatments by cash amount:* | | | | | | | | |
| Cash 250 | 0.15*** | 2.59** | 8.03*** | 1.42 | 0.09 | -0.08 | 1.36 | 0.28 |
| | (0.05) | (1.05) | (2.31) | (1.05) | (0.11) | (0.22) | (1.36) | (1.35) |
| Cash 500 | 0.26*** | 1.76* | 8.94*** | -1.00 | 0.06 | 0.10 | 1.87* | -1.63 |
| | (0.07) | (0.92) | (2.37) | (0.76) | (0.10) | (0.36) | (1.01) | (1.16) |
| Cash 750 | 0.28*** | 4.64*** | 12.71*** | 0.38 | 0.42*** | -0.10 | 3.26*** | -1.38 |
| | (0.06) | (0.95) | (2.02) | (0.96) | (0.14) | (0.22) | (1.25) | (1.11) |
| | | | | | | | | |
| Control mean | 0.07 | 15.15 | 26.35 | 9.39 | 0.51 | 1.13 | 7.04 | 10.23 |
| Control SD | 0.91 | 13.69 | 32.45 | 12.99 | 1.87 | 4.34 | 13.71 | 18.98 |
| No. of respondents | 596 | 596 | 596 | 596 | 596 | 596 | 596 | 596 |
| Observations | 6,781 | 6,784 | 6,784 | 6,784 | 6,784 | 6,784 | 6,784 | 6,784 |
| **Panel C. Pooled** | | | | | | | | |
| *Pooled cash treatment:* | | | | | | | | |
| Cash | 0.21*** | 2.25*** | 9.15*** | 0.18 | 0.30*** | 0.03 | 1.56** | -0.63 |
| | (0.03) | (0.57) | (1.34) | (0.51) | (0.10) | (0.20) | (0.63) | (0.64) |
| *Individual treatments by cash amount* | | | | | | | | |
| Cash 250 | 0.12*** | 1.50* | 5.56*** | 0.89 | 0.04 | -0.23 | 0.96 | 0.11 |
| | (0.04) | (0.87) | (2.00) | (0.81) | (0.12) | (0.23) | (1.01) | (1.00) |
| Cash 500 | 0.28*** | 1.61** | 9.06*** | -0.17 | 0.27* | 0.23 | 1.52* | -1.15 |
| | (0.05) | (0.74) | (1.97) | (0.64) | (0.15) | (0.34) | (0.85) | (0.88) |
| Cash 750 | 0.25*** | 3.69*** | 12.93*** | -0.18 | 0.60*** | 0.09 | 2.23** | -0.84 |
| | (0.05) | (0.81) | (1.89) | (0.76) | (0.17) | (0.24) | (0.96) | (0.85) |
| | | | | | | | | |
| Control mean | 0.14 | 17.19 | 28.55 | 9.18 | 1.13 | 2.21 | 6.14 | 8.46 |
| Control SD | 0.90 | 15.10 | 34.28 | 13.37 | 3.48 | 6.17 | 13.80 | 18.20 |
| No. of respondents | 1,093 | 1,093 | 1,093 | 1,093 | 1,093 | 1,093 | 1,093 | 1,093 |
| Observations | 9,706 | 9,709 | 9,709 | 9,709 | 9,709 | 9,709 | 9,709 | 9,709 |

Note: Regressions include baseline measurement, strata fixed effects, and indicator for market access treatment. Monetary outcomes are in USD and Winsorized at the 99th percentile. Standard errors clustered at the village level in parentheses. ***, **, and * represent significance at 1%, 5%, and 10%, respectively.

Table A4: Cash Transfers and Cashout Reported at Endline (Malawi only)

| | (1)<br>=1 if received any $50+ transfers | (2)<br>Total received amount (USD) | (3)<br>Total cashout amount (USD) | (4)<br>Total transport cost (USD) | (5)<br>Total withdrawal fee (USD) |
|---|---|---|---|---|---|
| *Pooled cash treatment:* | | | | | |
| Cash | 0.66*** | 295.80*** | 273.61*** | 3.82*** | 10.25*** |
| | (0.02) | (15.06) | (14.13) | (0.30) | (0.59) |
| *Individual treatments by cash amount:* | | | | | |
| Cash 250 | 0.63*** | 139.40*** | 127.26*** | 1.59*** | 5.03*** |
| | (0.03) | (8.13) | (7.73) | (0.15) | (0.34) |
| Cash 500 | 0.65*** | 289.71*** | 269.55*** | 3.85*** | 9.31*** |
| | (0.03) | (14.24) | (13.57) | (0.34) | (0.59) |
| Cash 750 | 0.69*** | 464.83*** | 430.06*** | 6.11*** | 16.66*** |
| | (0.03) | (24.55) | (22.84) | (0.65) | (1.06) |
| | | | | | |
| Control mean | 0.02 | 1.31 | 1.00 | 0.00 | 0.04 |
| Control SD | 0.13 | 12.51 | 11.52 | 0.09 | 1.17 |
| *p*-value (all three equal) | 0.348 | 0.000 | 0.000 | 0.000 | 0.000 |
| Observations | 2,784 | 2,784 | 2,784 | 2,784 | 2,784 |

Note: Regressions include strata fixed effects, and indicator for market access treatment. Standard errors clustered at the village level in parentheses. Winsorized at the 99th percentile. Monetary values in USD.

Table A5: Reasons for Cashout Reported at Endline (Malawi only)

| | (1) | (2) |
|---|---|---|
| | Aggregate cash amount specified for following reason | |
| | Mean | SD |
| Food | 32.79 | 37.39 |
| Nondurables | 11.58 | 46.95 |
| Clothes | 9.77 | 20.27 |
| Education | 6.41 | 21.15 |
| Home repair/construction | 106.03 | 102.70 |
| Contributions | 0.38 | 4.97 |
| Health preventatives | 4.67 | 19.86 |
| Durables | 20.26 | 53.25 |
| Farming inputs | 24.05 | 58.31 |
| Total | 215.95 | 145.34 |
| Observations | 968 | |

Note: Observations restricted to households who reported any large cash transfers in 2019-2021.

# Appendix B

## Effects on primary outcomes, disaggregated into underlying components (Endline survey)

Table B1: Effects on Individual Components of Food Security Index (Endline Survey)

| | (1) HDDS[a] (yesterday) | (2) FCS[b] (past week) | (3) HHS[c] (past month) | (4) FIES[d] (past year) |
|---|---|---|---|---|
| **Panel A. Liberia** | | | | |
| *Pooled cash treatment:* | | | | |
| Cash | 0.31*** | 2.82*** | -0.28*** | -0.73*** |
| | (0.08) | (0.64) | (0.06) | (0.10) |
| *Individual treatments by cash amount:* | | | | |
| Cash 250 | 0.21* | 1.90* | -0.12 | -0.54*** |
| | (0.11) | (0.98) | (0.08) | (0.13) |
| Cash 500 | 0.18* | 2.14** | -0.30*** | -0.71*** |
| | (0.11) | (0.90) | (0.07) | (0.14) |
| Cash 750 | 0.55*** | 4.44*** | -0.43*** | -0.95*** |
| | (0.09) | (0.79) | (0.08) | (0.16) |
| | | | | |
| Control mean | 5.36 | 47.32 | 1.34 | 6.50 |
| Control SD | 1.97 | 17.20 | 1.29 | 2.03 |
| *p*-value (all three equal) | 0.001 | 0.024 | 0.004 | 0.094 |
| Observations | 2,595 | 2,595 | 2,595 | 2,595 |
| | | | | |
| **Panel B. Malawi** | | | | |
| *Pooled cash treatment:* | | | | |
| Cash | 0.03 | 0.65 | -0.16*** | -0.37*** |
| | (0.07) | (0.59) | (0.04) | (0.11) |
| *Individual treatments by cash amount:* | | | | |
| Cash 250 | -0.02 | 0.24 | -0.13** | -0.18 |
| | (0.09) | (0.70) | (0.06) | (0.14) |
| Cash 500 | 0.06 | 0.36 | -0.18*** | -0.42*** |
| | (0.10) | (0.78) | (0.06) | (0.15) |
| Cash 750 | 0.07 | 1.37 | -0.17*** | -0.51*** |
| | (0.11) | (1.00) | (0.07) | (0.17) |
| | | | | |
| Control mean | 5.44 | 45.60 | 0.95 | 6.07 |
| Control SD | 1.80 | 14.62 | 1.28 | 2.75 |
| *p*-value (all three equal) | 0.674 | 0.555 | 0.737 | 0.189 |
| Observations | 2,784 | 2,784 | 2,784 | 2,784 |
| | | | | |
| **Panel C. Pooled** | | | | |
| *Pooled cash treatment:* | | | | |
| Cash | 0.17*** | 1.70*** | -0.22*** | -0.55*** |
| | (0.06) | (0.44) | (0.04) | (0.08) |
| *Individual treatments by cash amount* | | | | |
| Cash 250 | 0.10 | 1.06* | -0.12** | -0.36*** |
| | (0.07) | (0.60) | (0.05) | (0.10) |
| Cash 500 | 0.12* | 1.25** | -0.24*** | -0.59*** |
| | (0.07) | (0.60) | (0.05) | (0.11) |
| Cash 750 | 0.30*** | 2.82*** | -0.29*** | -0.72*** |
| | (0.07) | (0.65) | (0.05) | (0.12) |
| | | | | |
| Control mean | 5.40 | 46.43 | 1.14 | 6.28 |
| Control SD | 1.89 | 15.94 | 1.30 | 2.44 |
| *p*-value (all three equal) | 0.046 | 0.048 | 0.017 | 0.026 |
| Observations | 5,379 | 5,379 | 5,379 | 5,379 |

Note: In Columns 1, 2 and 5, higher values indicate improved food security; in Columns 3 and 4, lower values do. Regressions include baseline measurement, strata fixed effects, and indicator for market access treatment. Standard errors clustered at the village level in parentheses. ***, **, and * represent significance at 1%, 5%, and 10%, respectively.
[a] Household Dietary Diversity Score (HDDS) ranges from 0 to 12 (FAO 2013).
[b] Food Consumption Score (FCS) is a weighted sum of the number of days (WFP 2008).
[c] Household Hunger Scale (HHS) ranges from 0 (less severe) to 6 (more severe) (Ballard et al. 2011).
[d] Food Insecurity Experience Scale (FIES) ranges from 0 (less insecure) to 8 (more insecure) (Cafiero et al. 2018).

Table B2: Effects on Individual Expenditure Categories (Endline Survey)

| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) |
|---|---|---|---|---|---|---|---|---|---|---|
| | Food | Nondurables | Clothes | Education | Health | Alcohol/ Tobacco | Home repair | Religious contribute | Family events | Nonmedical emergency |

**Panel A. Liberia**
*Pooled cash treatment:*

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Cash | 0.68 | 0.75 | 1.72*** | 1.25*** | 1.41 | -0.00 | 0.57** | 0.34** | 0.12 | -0.05 |
| | (0.89) | (0.60) | (0.45) | (0.31) | (0.96) | (0.05) | (0.26) | (0.15) | (0.33) | (0.12) |

*Individual treatments by cash amount:*

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Cash 250 | -1.13 | -0.90 | 0.76 | 1.00** | 1.78 | 0.01 | 0.23 | 0.32 | -0.28 | -0.01 |
| | (1.17) | (0.74) | (0.58) | (0.49) | (1.79) | (0.07) | (0.33) | (0.20) | (0.46) | (0.20) |
| Cash 500 | 1.87 | 1.06 | 1.78*** | 1.69*** | 1.84 | -0.10* | 0.39 | 0.37 | 0.39 | -0.14 |
| | (1.37) | (0.81) | (0.58) | (0.48) | (1.51) | (0.05) | (0.35) | (0.24) | (0.48) | (0.14) |
| Cash 750 | 1.31 | 2.07** | 2.64*** | 1.06** | 0.60 | 0.08 | 1.09** | 0.33 | 0.24 | -0.01 |
| | (1.11) | (0.94) | (0.68) | (0.41) | (1.11) | (0.07) | (0.42) | (0.22) | (0.45) | (0.16) |
| | | | | | | | | | | |
| Control mean | 26.91 | 11.40 | 5.58 | 3.14 | 4.94 | 0.29 | 1.12 | 1.27 | 3.44 | 0.45 |
| Control SD | 21.46 | 14.37 | 11.32 | 7.16 | 19.24 | 1.14 | 5.92 | 3.31 | 8.41 | 3.10 |
| *p*-value (all three equal) | 0.092 | 0.010 | 0.041 | 0.461 | 0.713 | 0.046 | 0.184 | 0.986 | 0.468 | 0.741 |
| Observations | 2,595 | 2,595 | 2,595 | 2,595 | 2,595 | 2,595 | 2,595 | 2,595 | 2,595 | 2,595 |

**Panel B. Malawi**
*Pooled cash treatment:*

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Cash | 0.45 | 0.14 | 0.16 | -0.00 | 0.05 | -0.00 | 0.17 | 0.01 | -0.02 | -0.01 |
| | (0.47) | (0.27) | (0.22) | (0.13) | (0.11) | (0.01) | (0.16) | (0.06) | (0.08) | (0.03) |

*Individual treatments by cash amount:*

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Cash 250 | 0.40 | -0.03 | -0.03 | -0.01 | -0.04 | -0.01 | 0.10 | -0.04 | 0.03 | -0.04 |
| | (0.60) | (0.37) | (0.31) | (0.20) | (0.17) | (0.01) | (0.20) | (0.09) | (0.11) | (0.04) |
| Cash 500 | -0.09 | -0.06 | 0.27 | -0.12 | 0.12 | 0.00 | 0.24 | 0.05 | -0.04 | -0.01 |
| | (0.65) | (0.35) | (0.32) | (0.14) | (0.17) | (0.01) | (0.22) | (0.09) | (0.12) | (0.05) |
| Cash 750 | 1.04 | 0.51 | 0.24 | 0.13 | 0.06 | 0.00 | 0.16 | 0.02 | -0.07 | 0.02 |
| | (0.75) | (0.43) | (0.34) | (0.17) | (0.15) | (0.01) | (0.23) | (0.09) | (0.10) | (0.05) |
| | | | | | | | | | | |
| Control mean | 9.56 | 4.96 | 2.18 | 1.47 | 1.09 | 0.05 | 0.94 | 1.01 | 0.45 | 0.13 |
| Control SD | 10.81 | 7.31 | 5.53 | 3.52 | 2.64 | 0.28 | 3.56 | 1.63 | 1.80 | 0.93 |
| *p*-value (all three equal) | 0.429 | 0.446 | 0.719 | 0.375 | 0.741 | 0.776 | 0.868 | 0.697 | 0.701 | 0.520 |
| Observations | 2,784 | 2,784 | 2,784 | 2,784 | 2,784 | 2,784 | 2,784 | 2,784 | 2,784 | 2,784 |

**Panel C. Pooled**
*Pooled cash treatment:*

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Cash | 0.56 | 0.43 | 0.92*** | 0.60*** | 0.71 | -0.00 | 0.36** | 0.17** | 0.05 | -0.03 |
| | (0.49) | (0.33) | (0.25) | (0.17) | (0.47) | (0.02) | (0.15) | (0.08) | (0.16) | (0.06) |

*Individual treatments by cash amount*

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Cash 250 | -0.32 | -0.44 | 0.36 | 0.46* | 0.83 | -0.00 | 0.16 | 0.13 | -0.12 | -0.03 |
| | (0.65) | (0.41) | (0.32) | (0.26) | (0.87) | (0.04) | (0.19) | (0.11) | (0.23) | (0.10) |
| Cash 500 | 0.85 | 0.47 | 1.00*** | 0.76*** | 0.96 | -0.04* | 0.31 | 0.20 | 0.17 | -0.07 |
| | (0.75) | (0.43) | (0.33) | (0.25) | (0.73) | (0.03) | (0.20) | (0.13) | (0.24) | (0.07) |
| Cash 750 | 1.17* | 1.28** | 1.41*** | 0.58*** | 0.32 | 0.04 | 0.61** | 0.17 | 0.08 | 0.01 |
| | (0.66) | (0.51) | (0.38) | (0.22) | (0.54) | (0.04) | (0.24) | (0.12) | (0.23) | (0.08) |
| | | | | | | | | | | |
| Control mean | 17.98 | 8.09 | 3.83 | 2.28 | 2.96 | 0.16 | 1.03 | 1.13 | 1.90 | 0.29 |
| Control SD | 18.94 | 11.75 | 8.99 | 5.65 | 13.67 | 0.83 | 4.85 | 2.59 | 6.19 | 2.26 |
| *p*-value (all three equal) | 0.134 | 0.008 | 0.041 | 0.644 | 0.712 | 0.073 | 0.250 | 0.897 | 0.585 | 0.671 |
| Observations | 5,379 | 5,379 | 5,379 | 5,379 | 5,379 | 5,379 | 5,379 | 5,379 | 5,379 | 5,379 |

Note: Regressions include baseline measurement, strata fixed effects, and indicator for market access treatment. Standard errors clustered at the village level in parentheses. Monetary outcomes are in USD and Winsorized at the 99th percentile. ***, **, and * represent significance at 1%, 5%, and 10%, respectively.

Table B3: Effect on Components of Non-Agricultural Income (Endline Survey)

| | (1) Casual labor | (2) | (3) Self employment | (4) | (5) Other income source | (6) |
|---|---|---|---|---|---|---|
| | Self | Spouse | Self | Spouse | Self | Spouse |
| **Panel A. Liberia** | | | | | | |
| *Pooled cash treatment:* | | | | | | |
| Cash | -0.64** | -0.22 | 0.53 | 0.52* | 0.51 | 0.85* |
| | (0.29) | (0.29) | (0.87) | (0.31) | (0.37) | (0.46) |
| *Individual treatments by cash amount:* | | | | | | |
| Cash 250 | -0.58 | -0.05 | 1.20 | 0.84 | 0.93* | 0.23 |
| | (0.39) | (0.49) | (1.88) | (0.62) | (0.54) | (0.54) |
| Cash 500 | -0.95*** | -0.08 | 0.73 | 0.64 | -0.06 | 1.74** |
| | (0.31) | (0.47) | (0.96) | (0.52) | (0.65) | (0.87) |
| Cash 750 | -0.38 | -0.53 | -0.34 | 0.08 | 0.66 | 0.56 |
| | (0.46) | (0.35) | (0.78) | (0.31) | (0.55) | (0.79) |
| | | | | | | |
| Control mean | 2.17 | 1.40 | 2.41 | 0.40 | 0.89 | 0.86 |
| Control SD | 7.01 | 5.66 | 22.39 | 4.93 | 7.42 | 7.67 |
| *p*-value (all three equal) | 0.369 | 0.600 | 0.393 | 0.386 | 0.449 | 0.317 |
| Observations | 2,595 | 2,595 | 2,595 | 2,595 | 2,595 | 2,595 |
| | | | | | | |
| **Panel B. Malawi** | | | | | | |
| *Pooled cash treatment:* | | | | | | |
| Cash | -0.38 | 0.46 | 0.27 | -0.09 | 0.22 | 0.38 |
| | (0.24) | (0.39) | (0.41) | (0.16) | (0.22) | (0.46) |
| *Individual treatments by cash amount:* | | | | | | |
| Cash 250 | 0.02 | 0.00 | 0.33 | -0.16 | 0.07 | 2.04** |
| | (0.35) | (0.54) | (0.53) | (0.14) | (0.25) | (0.88) |
| Cash 500 | -0.55* | 0.76 | -0.49 | -0.24* | 0.03 | -0.26 |
| | (0.33) | (0.54) | (0.50) | (0.13) | (0.17) | (0.60) |
| Cash 750 | -0.62** | 0.61 | 1.01 | 0.16 | 0.58 | -0.69* |
| | (0.28) | (0.55) | (0.72) | (0.32) | (0.53) | (0.41) |
| | | | | | | |
| Control mean | 2.66 | 2.68 | 2.14 | 0.22 | 0.25 | 1.43 |
| Control SD | 5.97 | 9.20 | 10.20 | 4.42 | 4.42 | 10.92 |
| *p*-value (all three equal) | 0.202 | 0.492 | 0.132 | 0.291 | 0.596 | 0.008 |
| Observations | 2,784 | 2,784 | 2,784 | 2,784 | 2,784 | 2,784 |
| | | | | | | |
| **Panel C. Pooled** | | | | | | |
| *Pooled cash treatment:* | | | | | | |
| Cash | -0.50*** | 0.13 | 0.38 | 0.21 | 0.38* | 0.61* |
| | (0.19) | (0.24) | (0.48) | (0.17) | (0.21) | (0.33) |
| *Individual treatments by cash amount* | | | | | | |
| Cash 250 | -0.26 | -0.03 | 0.65 | 0.32 | 0.52* | 1.18** |
| | (0.26) | (0.37) | (0.95) | (0.31) | (0.31) | (0.54) |
| Cash 500 | -0.75*** | 0.35 | 0.03 | 0.18 | 0.01 | 0.70 |
| | (0.23) | (0.36) | (0.53) | (0.26) | (0.32) | (0.53) |
| Cash 750 | -0.50* | 0.06 | 0.47 | 0.12 | 0.62 | -0.08 |
| | (0.27) | (0.33) | (0.57) | (0.22) | (0.38) | (0.44) |
| | | | | | | |
| Control mean | 2.42 | 2.06 | 2.27 | 0.31 | 0.56 | 1.16 |
| Control SD | 6.50 | 7.72 | 17.23 | 4.68 | 6.07 | 9.49 |
| *p*-value (all three equal) | 0.223 | 0.679 | 0.704 | 0.862 | 0.314 | 0.131 |
| Observations | 5,379 | 5,379 | 5,379 | 5,379 | 5,379 | 5,379 |

Note: Regressions include baseline measurement, strata fixed effects, and indicator for market access treatment. Standard errors clustered at the village level in parentheses. Monetary outcomes are in USD and Winsorized at the 99th percentile. ***, **, and * represent significance at 1%, 5%, and 10%, respectively.

Table B4: Effects on Types of Interpersonal Transfers (Endline Survey)

| | (1) Transfers Sent | (2) | (3) Transfers Received | (4) |
|---|---|---|---|---|
| | Spouse | Non-spouse | Spouse | Non-spouse |
| **Panel A. Liberia** | | | | |
| *Pooled cash treatment:* | | | | |
| Cash | 0.67 | -0.45 | 2.91*** | -0.34 |
| | (0.55) | (0.38) | (0.78) | (0.47) |
| *Individual treatments by cash amount:* | | | | |
| Cash 250 | 0.85 | -0.93** | 2.46** | -0.57 |
| | (0.80) | (0.45) | (1.05) | (0.55) |
| Cash 500 | 0.43 | -0.23 | 2.13** | -0.40 |
| | (0.78) | (0.47) | (0.96) | (0.58) |
| Cash 750 | 0.71 | -0.20 | 4.16*** | -0.05 |
| | (0.81) | (0.47) | (1.30) | (0.67) |
| | | | | |
| Control mean | 3.17 | 2.00 | 8.39 | 2.63 |
| Control SD | 9.80 | 11.29 | 15.00 | 14.26 |
| *p*-value (all three equal) | 0.911 | 0.174 | 0.349 | 0.739 |
| Observations | 1,794 | 2,595 | 1,794 | 2,595 |
| | | | | |
| **Panel B. Malawi** | | | | |
| *Pooled cash treatment:* | | | | |
| Cash | 0.23 | 0.01 | -0.25 | 0.17 |
| | (0.19) | (0.06) | (0.73) | (0.19) |
| *Individual treatments by cash amount:* | | | | |
| Cash 250 | 0.24 | 0.03 | -0.20 | 0.06 |
| | (0.31) | (0.08) | (1.03) | (0.26) |
| Cash 500 | 0.14 | -0.08 | -0.69 | 0.10 |
| | (0.24) | (0.07) | (0.99) | (0.27) |
| Cash 750 | 0.31 | 0.08 | 0.17 | 0.34 |
| | (0.28) | (0.09) | (1.14) | (0.28) |
| | | | | |
| Control mean | 0.97 | 0.42 | 9.04 | 1.01 |
| Control SD | 3.23 | 1.84 | 14.15 | 4.31 |
| *p*-value (all three equal) | 0.882 | 0.124 | 0.801 | 0.682 |
| Observations | 1,885 | 2,784 | 1,885 | 2,784 |
| | | | | |
| **Panel C. Pooled** | | | | |
| *Pooled cash treatment:* | | | | |
| Cash | 0.44 | -0.23 | 1.32** | -0.09 |
| | (0.28) | (0.19) | (0.54) | (0.25) |
| *Individual treatments by cash amount* | | | | |
| Cash 250 | 0.54 | -0.44* | 1.14 | -0.25 |
| | (0.42) | (0.22) | (0.75) | (0.29) |
| Cash 500 | 0.27 | -0.17 | 0.69 | -0.15 |
| | (0.39) | (0.23) | (0.69) | (0.31) |
| Cash 750 | 0.51 | -0.06 | 2.17** | 0.15 |
| | (0.42) | (0.23) | (0.87) | (0.36) |
| | | | | |
| Control mean | 2.06 | 1.19 | 8.72 | 1.80 |
| Control SD | 7.35 | 8.01 | 14.57 | 10.44 |
| *p*-value (all three equal) | 0.843 | 0.210 | 0.316 | 0.556 |
| Observations | 3,679 | 5,379 | 3,679 | 5,379 |

Note: Regressions include baseline measurement, strata fixed effects, and indicator for market access treatment. Standard errors clustered at the village level in parentheses. Monetary outcomes are in USD and Winsorized at the 99th percentile.

Table B5: Effects on Components of Non-Land Wealth (Endline Survey)

| | (1) Durables | (2) Livestock | (3) Farm tools | (4) Business capital | (5) Savings | (6) Debt |
|---|---|---|---|---|---|---|
| **Panel A. Liberia** | | | | | | |
| *Pooled cash treatment:* | | | | | | |
| Cash | 40.78*** | 3.93 | 2.34*** | 4.07*** | 6.29** | -0.20 |
| | (7.92) | (3.44) | (0.71) | (1.38) | (2.72) | (0.87) |
| *Individual treatments by cash amount:* | | | | | | |
| Cash 250 | 31.33*** | 3.65 | 1.24 | 5.58*** | 4.52 | -0.67 |
| | (11.48) | (4.43) | (0.91) | (2.12) | (3.59) | (1.14) |
| Cash 500 | 52.13*** | 3.70 | 2.65** | 4.38** | 9.76** | 0.23 |
| | (13.73) | (4.79) | (1.08) | (2.03) | (4.65) | (1.34) |
| Cash 750 | 38.85*** | 4.44 | 3.14*** | 2.23 | 4.58 | -0.18 |
| | (11.81) | (5.05) | (1.12) | (1.54) | (3.47) | (1.19) |
| | | | | | | |
| Control mean | 54.13 | 38.11 | 11.47 | 6.46 | 18.68 | 5.25 |
| Control SD | 154.30 | 92.96 | 13.78 | 32.68 | 64.44 | 19.82 |
| *p*-value (all three equal) | 0.473 | 0.989 | 0.285 | 0.264 | 0.558 | 0.835 |
| Observations | 2,595 | 2,595 | 2,595 | 2,595 | 2,595 | 2,595 |
| | | | | | | |
| **Panel B. Malawi** | | | | | | |
| *Pooled cash treatment:* | | | | | | |
| Cash | 17.94*** | 11.12** | 0.76* | -0.92 | 3.08** | -0.16 |
| | (4.87) | (4.68) | (0.45) | (0.70) | (1.30) | (0.87) |
| *Individual treatments by cash amount:* | | | | | | |
| Cash 250 | 8.31 | -2.17 | -0.09 | -1.30 | 1.97* | 0.25 |
| | (6.22) | (5.52) | (0.62) | (0.86) | (1.05) | (1.08) |
| Cash 500 | 11.49** | 18.52*** | 0.98* | -1.37 | 0.54 | -1.62 |
| | (5.68) | (6.50) | (0.56) | (0.94) | (0.88) | (1.05) |
| Cash 750 | 34.67*** | 17.23** | 1.42* | -0.05 | 6.88* | 0.92 |
| | (7.91) | (7.64) | (0.74) | (1.05) | (3.53) | (1.33) |
| | | | | | | |
| Control mean | 63.39 | 48.59 | 9.51 | 5.02 | 6.28 | 7.47 |
| Control SD | 142.10 | 120.52 | 10.17 | 20.93 | 16.42 | 19.66 |
| *p*-value (all three equal) | 0.008 | 0.006 | 0.163 | 0.467 | 0.137 | 0.125 |
| Observations | 2,784 | 2,784 | 2,784 | 2,784 | 2,784 | 2,784 |
| | | | | | | |
| **Panel C. Pooled** | | | | | | |
| *Pooled cash treatment:* | | | | | | |
| Cash | 29.05*** | 8.35*** | 1.53*** | 1.52* | 4.63*** | -0.14 |
| | (4.64) | (2.99) | (0.42) | (0.77) | (1.48) | (0.62) |
| *Individual treatments by cash amount* | | | | | | |
| Cash 250 | 19.43*** | 1.37 | 0.56 | 2.02* | 3.19* | -0.15 |
| | (6.42) | (3.58) | (0.54) | (1.14) | (1.81) | (0.78) |
| Cash 500 | 31.10*** | 12.41*** | 1.79*** | 1.42 | 4.95** | -0.74 |
| | (7.45) | (4.23) | (0.60) | (1.10) | (2.33) | (0.86) |
| Cash 750 | 36.79*** | 11.32** | 2.26*** | 1.10 | 5.78** | 0.48 |
| | (7.06) | (4.75) | (0.67) | (0.94) | (2.49) | (0.90) |
| | | | | | | |
| Control mean | 58.90 | 43.51 | 10.46 | 5.72 | 12.30 | 6.39 |
| Control SD | 148.19 | 108.13 | 12.10 | 27.28 | 46.82 | 19.77 |
| *p*-value (all three equal) | 0.126 | 0.032 | 0.057 | 0.757 | 0.606 | 0.519 |
| Observations | 5,379 | 5,379 | 5,379 | 5,379 | 5,379 | 5,379 |

Note: Regressions include baseline measurement, strata fixed effects, and indicator for market access treatment. Standard errors clustered at the village level in parentheses. Monetary outcomes are in USD and Winsorized at the 99th percentile. ***, **, and * represent significance at 1%, 5%, and 10%, respectively.

## Table B6: Effects on Livestock (Endline Survey)

| | (1) | (2) | (3) | (4) | (5) |
|---|---|---|---|---|---|
| | | Since the date of baseline survey: | | | |
| | Herd size | Purchased (USD) | Sold (USD) | Consumed | |
| | | | | Num | USD |
| **Panel A. Liberia** | | | | | |
| *Pooled cash treatment:* | | | | | |
| Cash | 0.58*** | 0.34 | 0.18 | 0.04 | 0.31 |
| | (0.22) | (0.66) | (0.37) | (0.06) | (0.32) |
| *Individual treatments by cash amount:* | | | | | |
| Cash 250 | 0.66* | 0.42 | 0.18 | 0.07 | 0.21 |
| | (0.35) | (0.95) | (0.49) | (0.08) | (0.39) |
| Cash 500 | 0.65** | -0.03 | 0.04 | 0.04 | 0.29 |
| | (0.30) | (0.86) | (0.47) | (0.09) | (0.52) |
| Cash 750 | 0.43 | 0.64 | 0.31 | 0.01 | 0.44 |
| | (0.31) | (1.01) | (0.57) | (0.09) | (0.47) |
| | | | | | |
| Control mean | 3.95 | 4.43 | 1.83 | 0.61 | 2.57 |
| Control SD | 5.42 | 15.73 | 9.34 | 1.54 | 8.04 |
| *p*-value (all three equal) | 0.798 | 0.827 | 0.914 | 0.865 | 0.907 |
| Observations | 2,595 | 2,595 | 2,595 | 2,595 | 2,595 |
| | | | | | |
| **Panel B. Malawi** | | | | | |
| *Pooled cash treatment:* | | | | | |
| Cash | 0.75*** | 2.62*** | 1.13** | 0.37*** | 0.92** |
| | (0.24) | (0.61) | (0.55) | (0.11) | (0.38) |
| *Individual treatments by cash amount:* | | | | | |
| Cash 250 | 0.14 | 0.77 | -0.19 | 0.22 | 0.15 |
| | (0.29) | (0.73) | (0.61) | (0.15) | (0.45) |
| Cash 500 | 1.09*** | 3.39*** | 1.87** | 0.42*** | 1.27** |
| | (0.32) | (0.91) | (0.78) | (0.14) | (0.55) |
| Cash 750 | 1.04** | 3.76*** | 1.74* | 0.46*** | 1.35** |
| | (0.41) | (0.99) | (0.95) | (0.17) | (0.62) |
| | | | | | |
| Control mean | 3.97 | 3.62 | 3.55 | 0.95 | 3.40 |
| Control SD | 6.62 | 13.12 | 13.25 | 2.35 | 9.14 |
| *p*-value (all three equal) | 0.014 | 0.007 | 0.025 | 0.409 | 0.093 |
| Observations | 2,784 | 2,784 | 2,784 | 2,784 | 2,784 |
| | | | | | |
| **Panel C. Pooled** | | | | | |
| *Pooled cash treatment:* | | | | | |
| Cash | 0.69*** | 1.51*** | 0.67** | 0.21*** | 0.62** |
| | (0.17) | (0.45) | (0.34) | (0.06) | (0.25) |
| *Individual treatments by cash amount* | | | | | |
| Cash 250 | 0.41* | 0.58 | -0.02 | 0.15* | 0.17 |
| | (0.22) | (0.60) | (0.40) | (0.09) | (0.30) |
| Cash 500 | 0.91*** | 1.74*** | 0.99** | 0.24*** | 0.80** |
| | (0.23) | (0.64) | (0.47) | (0.09) | (0.38) |
| Cash 750 | 0.76*** | 2.24*** | 1.04* | 0.24** | 0.91** |
| | (0.26) | (0.72) | (0.57) | (0.10) | (0.40) |
| | | | | | |
| Control mean | 3.96 | 4.01 | 2.72 | 0.78 | 3.00 |
| Control SD | 6.06 | 14.45 | 11.55 | 2.01 | 8.63 |
| *p*-value (all three equal) | 0.181 | 0.106 | 0.081 | 0.616 | 0.154 |
| Observations | 5,379 | 5,379 | 5,379 | 5,379 | 5,379 |

Note: Regressions include baseline measurement, strata fixed effects, and indicator for market access treatment. Standard errors clustered at the village level in parentheses. Monetary outcomes are in USD and Winsorized at the 99th percentile. ***, **, and * represent significance at 1%, 5%, and 10%, respectively.

Table B7: Effects on Specific Categories of Intimate Partner Violence (Endline Survey)

| | (1) Controlling Behavior | (2) Emotional IPV | (3) Physical IPV | (4) Sexual IPV |
|---|---|---|---|---|
| **Panel A. Liberia** | | | | |
| *Pooled cash treatment:* | | | | |
| Cash | -0.03 | -0.09*** | -0.03 | -0.04*** |
| | (0.03) | (0.03) | (0.02) | (0.01) |
| *Individual treatments by cash amount:* | | | | |
| Cash 250 | -0.05 | -0.07* | -0.02 | -0.05*** |
| | (0.04) | (0.04) | (0.03) | (0.02) |
| Cash 500 | 0.00 | -0.09** | -0.06** | -0.04** |
| | (0.04) | (0.04) | (0.03) | (0.02) |
| Cash 750 | -0.06 | -0.11*** | -0.02 | -0.04** |
| | (0.04) | (0.04) | (0.03) | (0.02) |
| | | | | |
| Control mean | 0.55 | 0.34 | 0.23 | 0.10 |
| Control SD | 0.50 | 0.48 | 0.42 | 0.31 |
| *p*-value (all three equal) | 0.477 | 0.671 | 0.333 | 0.922 |
| Observations | 1,229 | 1,229 | 1,229 | 1,229 |
| | | | | |
| **Panel B. Malawi** | | | | |
| *Pooled cash treatment:* | | | | |
| Cash | 0.00 | 0.01 | 0.01 | 0.01 |
| | (0.02) | (0.01) | (0.01) | (0.01) |
| *Individual treatments by cash amount:* | | | | |
| Cash 250 | 0.03 | 0.02 | 0.01 | 0.02 |
| | (0.02) | (0.02) | (0.01) | (0.01) |
| Cash 500 | 0.01 | -0.00 | 0.02 | 0.01 |
| | (0.03) | (0.02) | (0.01) | (0.01) |
| Cash 750 | -0.03 | 0.00 | -0.00 | -0.01 |
| | (0.03) | (0.02) | (0.01) | (0.01) |
| | | | | |
| Control mean | 0.31 | 0.14 | 0.08 | 0.07 |
| Control SD | 0.46 | 0.35 | 0.27 | 0.26 |
| *p*-value (all three equal) | 0.120 | 0.669 | 0.463 | 0.148 |
| Observations | 1,829 | 1,829 | 1,829 | 1,829 |
| | | | | |
| **Panel C. Pooled** | | | | |
| *Pooled cash treatment:* | | | | |
| Cash | -0.01 | -0.03** | -0.01 | -0.01 |
| | (0.02) | (0.01) | (0.01) | (0.01) |
| *Individual treatments by cash amount* | | | | |
| Cash 250 | -0.00 | -0.02 | -0.00 | -0.01 |
| | (0.02) | (0.02) | (0.01) | (0.01) |
| Cash 500 | 0.01 | -0.04** | -0.02 | -0.01 |
| | (0.02) | (0.02) | (0.01) | (0.01) |
| Cash 750 | -0.04* | -0.04** | -0.01 | -0.02** |
| | (0.02) | (0.02) | (0.01) | (0.01) |
| | | | | |
| Control mean | 0.42 | 0.23 | 0.14 | 0.08 |
| Control SD | 0.49 | 0.42 | 0.35 | 0.28 |
| *p*-value (all three equal) | 0.177 | 0.513 | 0.740 | 0.377 |
| Observations | 3,058 | 3,058 | 3,058 | 3,058 |

Note: Regressions include whether IPV was measured in ACASI or FTFI as well as baseline measurement, strata fixed effects, and indicator for market access treatment. Standard errors clustered at the village level in parentheses.

Table B8: Effects on Specific Categories of Agricultural Inputs (Endline survey)

| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
|---|---|---|---|---|---|---|---|---|
| | Fertilizer | | Seeds | | Pesticides | | Total | |
| | =1 if any | Amount (USD) | =1 if any | Amount (USD) | =1 if any | Amount (USD) | =1 if any | Amount (USD) |
| **Panel A. Liberia** | | | | | | | | |
| *Pooled cash treatment:* | | | | | | | | |
| Cash | -0.00 | -0.41 | 0.02 | 0.15 | 0.01 | 0.10 | 0.01 | -0.17 |
| | (0.02) | (0.96) | (0.01) | (0.20) | (0.01) | (0.18) | (0.02) | (1.21) |
| *Individual treatments by cash amount:* | | | | | | | | |
| Cash 250 | -0.03 | -2.36** | 0.01 | -0.20 | -0.01 | -0.01 | -0.01 | -2.66** |
| | (0.02) | (1.03) | (0.02) | (0.24) | (0.01) | (0.25) | (0.02) | (1.29) |
| Cash 500 | 0.03 | 0.12 | 0.02 | 0.23 | 0.03 | 0.21 | 0.04 | 0.60 |
| | (0.02) | (1.06) | (0.01) | (0.29) | (0.02) | (0.23) | (0.03) | (1.41) |
| Cash 750 | -0.01 | 1.02 | 0.02 | 0.42 | 0.00 | 0.10 | -0.00 | 1.54 |
| | (0.02) | (1.49) | (0.01) | (0.33) | (0.02) | (0.25) | (0.02) | (1.93) |
| | | | | | | | | |
| Control mean | 0.09 | 3.47 | 0.06 | 0.69 | 0.07 | 0.65 | 0.15 | 4.81 |
| Control SD | 0.29 | 18.39 | 0.23 | 4.58 | 0.25 | 3.35 | 0.36 | 21.67 |
| *p*-value (all three equal) | 0.082 | 0.004 | 0.645 | 0.164 | 0.294 | 0.750 | 0.260 | 0.007 |
| Observations | 2,595 | 2,595 | 2,595 | 2,595 | 2,595 | 2,595 | 2,595 | 2,595 |
| | | | | | | | | |
| **Panel B. Malawi** | | | | | | | | |
| *Pooled cash treatment:* | | | | | | | | |
| Cash | 0.02 | 2.40*** | 0.03 | 0.30*** | -0.01 | 0.02 | 0.02* | 2.73*** |
| | (0.01) | (0.67) | (0.02) | (0.11) | (0.01) | (0.02) | (0.01) | (0.71) |
| *Individual treatments by cash amount:* | | | | | | | | |
| Cash 250 | 0.01 | 1.46 | -0.01 | 0.24 | -0.03* | 0.00 | 0.00 | 1.74* |
| | (0.01) | (0.92) | (0.03) | (0.16) | (0.01) | (0.03) | (0.01) | (0.97) |
| Cash 500 | 0.02 | 2.52*** | 0.06** | 0.38** | 0.00 | 0.02 | 0.02* | 2.91*** |
| | (0.02) | (0.90) | (0.03) | (0.16) | (0.02) | (0.04) | (0.01) | (0.96) |
| Cash 750 | 0.04** | 3.25*** | 0.03 | 0.28* | -0.01 | 0.02 | 0.04** | 3.56*** |
| | (0.02) | (1.04) | (0.03) | (0.16) | (0.02) | (0.03) | (0.02) | (1.11) |
| | | | | | | | | |
| Control mean | 0.92 | 15.32 | 0.38 | 1.24 | 0.09 | 0.09 | 0.93 | 16.65 |
| Control SD | 0.26 | 16.65 | 0.48 | 2.77 | 0.28 | 0.53 | 0.25 | 17.65 |
| *p*-value (all three equal) | 0.302 | 0.337 | 0.151 | 0.770 | 0.300 | 0.856 | 0.074 | 0.354 |
| Observations | 2,784 | 2,784 | 2,784 | 2,784 | 2,784 | 2,784 | 2,784 | 2,784 |
| | | | | | | | | |
| **Panel C. Pooled** | | | | | | | | |
| *Pooled cash treatment:* | | | | | | | | |
| Cash | 0.01 | 1.03* | 0.02* | 0.23** | -0.00 | 0.06 | 0.02 | 1.31* |
| | (0.01) | (0.59) | (0.01) | (0.11) | (0.01) | (0.09) | (0.01) | (0.70) |
| *Individual treatments by cash amount* | | | | | | | | |
| Cash 250 | -0.01 | -0.40 | -0.00 | 0.02 | -0.02 | 0.00 | -0.00 | -0.37 |
| | (0.01) | (0.70) | (0.02) | (0.14) | (0.01) | (0.12) | (0.01) | (0.81) |
| Cash 500 | 0.02 | 1.39* | 0.04** | 0.31* | 0.02 | 0.11 | 0.03** | 1.80** |
| | (0.01) | (0.72) | (0.02) | (0.16) | (0.01) | (0.11) | (0.02) | (0.86) |
| Cash 750 | 0.01 | 2.11** | 0.02 | 0.35* | -0.00 | 0.06 | 0.02 | 2.54** |
| | (0.01) | (0.92) | (0.02) | (0.18) | (0.01) | (0.12) | (0.01) | (1.11) |
| | | | | | | | | |
| Control mean | 0.52 | 9.57 | 0.22 | 0.97 | 0.08 | 0.36 | 0.55 | 10.90 |
| Control SD | 0.50 | 18.48 | 0.42 | 3.77 | 0.27 | 2.38 | 0.50 | 20.57 |
| *p*-value (all three equal) | 0.088 | 0.009 | 0.096 | 0.157 | 0.107 | 0.733 | 0.098 | 0.008 |
| Observations | 5,379 | 5,379 | 5,379 | 5,379 | 5,379 | 5,379 | 5,379 | 5,379 |

Note: Regressions include baseline measurement, strata fixed effects, and indicator for market access treatment. Standard errors clustered at the village level in parentheses. Monetary outcomes are in USD and Winsorized at the 99th percentile. ***, **, and * represent significance at 1%, 5%, and 10%, respectively.

# Appendix C

## Effects on Food Insecurity Categories

### Table C1: Household Dietary Diversity Score (HDDS), IPC Cutoffs

| *IPC categorization:* | (1) Phase 1 or Phase 2 (None/Minimal or Stressed) | (2) Phase 3 (Crisis) | (3) Phase 4 or Phase 5 (Emergency or Catastrophe/Famine) |
|---|---|---|---|
| *HDDS values:* | 5-12 | 3-4 | 0-2 |
| **Panel A. Liberia** | | | |
| *Pooled cash treatment:* | | | |
| Cash | 0.05*** | -0.04*** | -0.01 |
| | (0.02) | (0.02) | (0.01) |
| *Individual treatments by cash amount:* | | | |
| Cash 250 | 0.01 | -0.02 | 0.01 |
| | (0.03) | (0.02) | (0.02) |
| Cash 500 | 0.05* | -0.04* | -0.01 |
| | (0.02) | (0.02) | (0.01) |
| Cash 750 | 0.10*** | -0.08*** | -0.02* |
| | (0.02) | (0.02) | (0.01) |
| | | | |
| Control mean | 0.69 | 0.24 | 0.08 |
| *p*-value (all three equal) | 0.006 | 0.046 | 0.226 |
| Observations | 2,595 | 2,595 | 2,595 |
| | | | |
| **Panel B. Malawi** | | | |
| *Pooled cash treatment:* | | | |
| Cash | 0.00 | -0.00 | -0.00 |
| | (0.02) | (0.02) | (0.01) |
| *Individual treatments by cash amount:* | | | |
| Cash 250 | -0.01 | 0.01 | -0.00 |
| | (0.02) | (0.02) | (0.01) |
| Cash 500 | 0.01 | -0.00 | -0.01 |
| | (0.03) | (0.03) | (0.01) |
| Cash 750 | 0.01 | -0.01 | 0.01 |
| | (0.02) | (0.02) | (0.01) |
| | | | |
| Control mean | 0.67 | 0.31 | 0.02 |
| *p*-value (all three equal) | 0.841 | 0.773 | 0.265 |
| Observations | 2,784 | 2,784 | 2,784 |
| | | | |
| **Panel C. Pooled** | | | |
| *Pooled cash treatment:* | | | |
| Cash | 0.03** | -0.02* | -0.00 |
| | (0.01) | (0.01) | (0.01) |
| *Individual treatments by cash amount* | | | |
| Cash 250 | 0.00 | -0.00 | 0.00 |
| | (0.02) | (0.02) | (0.01) |
| Cash 500 | 0.03 | -0.02 | -0.01 |
| | (0.02) | (0.02) | (0.01) |
| Cash 750 | 0.05*** | -0.04*** | -0.01 |
| | (0.02) | (0.02) | (0.01) |
| | | | |
| Control mean | 0.68 | 0.28 | 0.05 |
| *p*-value (all three equal) | 0.068 | 0.137 | 0.562 |
| Observations | 5,379 | 5,379 | 5,379 |

Note: Regressions include baseline measurement, strata fixed effects, and indicator for market access treatment. Standard errors clustered at the village level in parentheses.

## Table C2: Food Consumption Score (FCS), IPC Cutoffs

| IPC categorization: | (1) Phase 1 or Phase 2 (None/Minimal or Stressed) | (2) Phase 3 (Crisis) | (3) Phase 4 or Phase 5 (Emergency or Catastrophe/Famine) |
|---|---|---|---|
| FCS values: | 35-112 | 21-35 | 0-21 |
| **Panel A. Liberia** | | | |
| *Pooled cash treatment:* | | | |
| Cash | 0.05*** | -0.03*** | -0.02* |
|  | (0.02) | (0.01) | (0.01) |
| *Individual treatments by cash amount:* | | | |
| Cash 250 | 0.03 | -0.01 | -0.02 |
|  | (0.02) | (0.02) | (0.02) |
| Cash 500 | 0.05** | -0.03* | -0.01 |
|  | (0.02) | (0.02) | (0.01) |
| Cash 750 | 0.08*** | -0.07*** | -0.02 |
|  | (0.02) | (0.02) | (0.01) |
|  | | | |
| Control mean | 0.77 | 0.14 | 0.08 |
| *p*-value (all three equal) | 0.059 | 0.011 | 0.856 |
| Observations | 2,595 | 2,595 | 2,595 |
| **Panel B. Malawi** | | | |
| *Pooled cash treatment:* | | | |
| Cash | 0.03* | -0.03* | -0.00 |
|  | (0.02) | (0.02) | (0.01) |
| *Individual treatments by cash amount:* | | | |
| Cash 250 | 0.06*** | -0.05** | -0.01 |
|  | (0.02) | (0.02) | (0.01) |
| Cash 500 | 0.01 | -0.01 | -0.00 |
|  | (0.02) | (0.02) | (0.01) |
| Cash 750 | 0.03 | -0.03 | 0.00 |
|  | (0.02) | (0.02) | (0.01) |
|  | | | |
| Control mean | 0.74 | 0.23 | 0.02 |
| *p*-value (all three equal) | 0.151 | 0.328 | 0.338 |
| Observations | 2,784 | 2,784 | 2,784 |
| **Panel C. Pooled** | | | |
| *Pooled cash treatment:* | | | |
| Cash | 0.04*** | -0.03*** | -0.01* |
|  | (0.01) | (0.01) | (0.01) |
| *Individual treatments by cash amount* | | | |
| Cash 250 | 0.04*** | -0.03** | -0.02* |
|  | (0.02) | (0.01) | (0.01) |
| Cash 500 | 0.03* | -0.02 | -0.01 |
|  | (0.02) | (0.02) | (0.01) |
| Cash 750 | 0.05*** | -0.05*** | -0.01 |
|  | (0.02) | (0.01) | (0.01) |
|  | | | |
| Control mean | 0.76 | 0.19 | 0.05 |
| *p*-value (all three equal) | 0.374 | 0.242 | 0.636 |
| Observations | 5,379 | 5,379 | 5,379 |

Note: Regressions include baseline measurement, strata fixed effects, and indicator for market access treatment. Standard errors clustered at the village level in parentheses.

Table C3: Household Hunger Scale (HHS), IPC Cutoffs

| IPC categorization: | (1)<br>Phase 1<br>(None<br>/Minimal) | (2)<br>Phase 2<br>(Stressed) | (3)<br>Phase 3<br>(Crisis) | (4)<br>Phase 4<br>(Emergency) | (5)<br>Phase 5<br>(Catastrophe<br>/Famine) |
|---|---|---|---|---|---|
| HHS values: | 0 | 1 | 2-3 | 4 | 5-6 |

**Panel A. Liberia**
*Pooled cash treatment:*

| | | | | | |
|---|---|---|---|---|---|
| Cash | 0.10*** | 0.00 | -0.11*** | -0.00 | 0.00 |
| | (0.02) | (0.02) | (0.02) | (0.00) | (0.00) |
| *Individual treatments by cash amount:* | | | | | |
| Cash 250 | 0.05 | 0.00 | -0.06** | 0.01 | 0.01 |
| | (0.03) | (0.02) | (0.03) | (0.01) | (0.01) |
| Cash 500 | 0.11*** | 0.01 | -0.11*** | -0.00 | -0.00 |
| | (0.03) | (0.02) | (0.03) | (0.01) | (0.00) |
| Cash 750 | 0.16*** | -0.00 | -0.14*** | -0.02*** | 0.00 |
| | (0.03) | (0.02) | (0.03) | (0.00) | (0.01) |
| | | | | | |
| Control mean | 0.38 | 0.19 | 0.41 | 0.01 | 0.01 |
| *p*-value (all three equal) | 0.023 | 0.856 | 0.090 | 0.000 | 0.176 |
| Observations | 2,595 | 2,595 | 2,595 | 2,595 | 2,595 |

**Panel B. Malawi**
*Pooled cash treatment:*

| | | | | | |
|---|---|---|---|---|---|
| Cash | 0.04** | 0.03** | -0.06*** | -0.01 | -0.00 |
| | (0.02) | (0.01) | (0.02) | (0.00) | (0.00) |
| *Individual treatments by cash amount:* | | | | | |
| Cash 250 | 0.02 | 0.03 | -0.04* | -0.01 | -0.00 |
| | (0.02) | (0.02) | (0.02) | (0.01) | (0.01) |
| Cash 500 | 0.05** | 0.01 | -0.05*** | -0.01* | -0.00 |
| | (0.02) | (0.02) | (0.02) | (0.01) | (0.01) |
| Cash 750 | 0.04 | 0.04** | -0.08*** | -0.00 | -0.01 |
| | (0.03) | (0.02) | (0.02) | (0.01) | (0.00) |
| | | | | | |
| Control mean | 0.56 | 0.15 | 0.26 | 0.02 | 0.01 |
| *p*-value (all three equal) | 0.488 | 0.416 | 0.441 | 0.615 | 0.751 |
| Observations | 2,784 | 2,784 | 2,784 | 2,784 | 2,784 |

**Panel C. Pooled**
*Pooled cash treatment:*

| | | | | | |
|---|---|---|---|---|---|
| Cash | 0.07*** | 0.02 | -0.08*** | -0.00 | -0.00 |
| | (0.01) | (0.01) | (0.01) | (0.00) | (0.00) |
| *Individual treatments by cash amount* | | | | | |
| Cash 250 | 0.03* | 0.02 | -0.05*** | 0.00 | 0.00 |
| | (0.02) | (0.01) | (0.02) | (0.00) | (0.00) |
| Cash 500 | 0.08*** | 0.01 | -0.08*** | -0.01* | -0.00 |
| | (0.02) | (0.01) | (0.02) | (0.00) | (0.00) |
| Cash 750 | 0.10*** | 0.02 | -0.11*** | -0.01** | -0.00 |
| | (0.02) | (0.02) | (0.02) | (0.00) | (0.00) |
| | | | | | |
| Control mean | 0.47 | 0.17 | 0.33 | 0.02 | 0.01 |
| *p*-value (all three equal) | 0.037 | 0.834 | 0.045 | 0.066 | 0.580 |
| Observations | 5,379 | 5,379 | 5,379 | 5,379 | 5,379 |

Note: Regressions include baseline measurement, strata fixed effects, and indicator for market access treatment. Standard errors clustered at the village level in parentheses.

# Appendix D

## Effects on Secondary Outcomes

Table D1: Effects on Labor Supply (Endline)

| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
|---|---|---|---|---|---|---|---|---|
| | | | For female and/or male household heads: | | | | | |
| | Own farm | | Casual labor | | Own business | | Other job | |
| | =1 if any | Number of hours | =1 if any | Number of hours | =1 if any | Number of hours | =1 if any | Number of hours |
| **Panel A. Liberia** | | | | | | | | |
| *Pooled cash treatment:* | | | | | | | | |
| Cash | -0.02 | -2.29 | -0.10*** | -6.38*** | 0.02 | -0.47 | 0.02 | 1.05* |
| | (0.02) | (3.05) | (0.02) | (1.56) | (0.02) | (1.56) | (0.01) | (0.62) |
| *Individual treatments by cash amount:* | | | | | | | | |
| Cash 250 | -0.02 | -5.02 | -0.10*** | -5.08** | 0.01 | -0.43 | 0.01 | 0.76 |
| | (0.03) | (3.84) | (0.03) | (2.22) | (0.02) | (2.06) | (0.01) | (0.88) |
| Cash 500 | 0.01 | -3.14 | -0.10*** | -7.12*** | 0.02 | -1.00 | 0.02 | 1.68* |
| | (0.03) | (3.51) | (0.02) | (1.82) | (0.02) | (2.05) | (0.01) | (1.00) |
| Cash 750 | -0.05* | 1.30 | -0.10*** | -6.93*** | 0.03 | 0.01 | 0.01 | 0.71 |
| | (0.03) | (4.67) | (0.02) | (1.79) | (0.02) | (2.03) | (0.02) | (0.93) |
| | | | | | | | | |
| Control mean | 0.69 | 43.50 | 0.32 | 16.98 | 0.14 | 9.09 | 0.06 | 1.98 |
| Control SD | 0.46 | 70.13 | 0.47 | 39.93 | 0.35 | 38.66 | 0.24 | 14.84 |
| *p*-value (all three equal) | 0.208 | 0.446 | 0.993 | 0.624 | 0.786 | 0.905 | 0.795 | 0.688 |
| Observations | 2,595 | 2,595 | 2,595 | 2,595 | 2,595 | 2,595 | 2,595 | 2,595 |
| **Panel B. Malawi** | | | | | | | | |
| *Pooled cash treatment:* | | | | | | | | |
| Cash | 0.02 | 0.80 | -0.04* | -1.38 | -0.02 | -0.34 | 0.01 | -0.17 |
| | (0.02) | (0.75) | (0.02) | (1.90) | (0.02) | (1.16) | (0.01) | (1.01) |
| *Individual treatments by cash amount:* | | | | | | | | |
| Cash 250 | 0.00 | -0.73 | -0.01 | 0.27 | -0.01 | 1.05 | 0.03* | 0.96 |
| | (0.03) | (0.87) | (0.03) | (2.57) | (0.02) | (1.79) | (0.01) | (1.36) |
| Cash 500 | 0.03 | 1.72 | -0.07*** | -2.10 | -0.03 | -0.82 | 0.01 | -0.36 |
| | (0.03) | (1.18) | (0.02) | (2.52) | (0.02) | (1.47) | (0.01) | (1.49) |
| Cash 750 | 0.04 | 1.42 | -0.03 | -2.34 | -0.01 | -1.28 | -0.01 | -1.14 |
| | (0.03) | (1.19) | (0.03) | (2.63) | (0.02) | (1.48) | (0.01) | (1.21) |
| | | | | | | | | |
| Control mean | 0.59 | 9.85 | 0.43 | 21.90 | 0.22 | 6.21 | 0.06 | 3.69 |
| Control SD | 0.49 | 19.48 | 0.49 | 47.52 | 0.42 | 29.29 | 0.25 | 25.84 |
| *p*-value (all three equal) | 0.551 | 0.089 | 0.207 | 0.636 | 0.657 | 0.479 | 0.120 | 0.359 |
| Observations | 2,784 | 2,784 | 2,784 | 2,784 | 2,784 | 2,784 | 2,784 | 2,784 |
| **Panel C. Pooled** | | | | | | | | |
| *Pooled cash treatment:* | | | | | | | | |
| Cash | 0.00 | -0.71 | -0.07*** | -3.72*** | -0.00 | -0.40 | 0.01 | 0.42 |
| | (0.01) | (1.53) | (0.01) | (1.24) | (0.01) | (0.96) | (0.01) | (0.60) |
| *Individual treatments by cash amount* | | | | | | | | |
| Cash 250 | -0.01 | -2.80 | -0.06*** | -2.22 | -0.00 | 0.35 | 0.02** | 0.88 |
| | (0.02) | (1.90) | (0.02) | (1.73) | (0.01) | (1.36) | (0.01) | (0.82) |
| Cash 500 | 0.02 | -0.64 | -0.08*** | -4.49*** | -0.01 | -0.91 | 0.01 | 0.63 |
| | (0.02) | (1.81) | (0.02) | (1.58) | (0.02) | (1.24) | (0.01) | (0.91) |
| Cash 750 | -0.01 | 1.34 | -0.07*** | -4.47*** | 0.01 | -0.65 | -0.00 | -0.25 |
| | (0.02) | (2.34) | (0.02) | (1.61) | (0.02) | (1.25) | (0.01) | (0.77) |
| | | | | | | | | |
| Control mean | 0.64 | 26.18 | 0.37 | 19.51 | 0.18 | 7.61 | 0.06 | 2.86 |
| Control SD | 0.48 | 53.52 | 0.48 | 44.06 | 0.39 | 34.19 | 0.25 | 21.24 |
| *p*-value (all three equal) | 0.423 | 0.228 | 0.396 | 0.407 | 0.771 | 0.686 | 0.260 | 0.462 |
| Observations | 5,379 | 5,379 | 5,379 | 5,379 | 5,379 | 5,379 | 5,379 | 5,379 |

Note: Regressions include baseline measurement, strata fixed effects, and indicator for market access treatment. Standard errors clustered at the village level in parentheses. Nonbinary outcomes are Winsorized at the 99th percentile.

## Table D2: Effects on Health Investment (Endline)

| | (1) | (2) | (3) | (4) |
|---|---|---|---|---|
| | Proportion of household members: | | | Average proportion of under-5 children with recommended vaccinations[b] |
| | sought preventative care (past 3 months) | slept under bednet (yesterday) | with any vaccinations (under 18)[a] | |
| **Panel A. Liberia** | | | | |
| *Pooled cash treatment:* | | | | |
| Cash | 0.00 | 0.05*** | 0.01 | -0.01 |
| | (0.00) | (0.02) | (0.01) | (0.02) |
| *Individual treatments by cash amount:* | | | | |
| Cash 250 | 0.01* | 0.04 | 0.01 | -0.03 |
| | (0.01) | (0.02) | (0.01) | (0.03) |
| Cash 500 | 0.00 | 0.05** | 0.02 | -0.00 |
| | (0.00) | (0.02) | (0.02) | (0.03) |
| Cash 750 | -0.00 | 0.06*** | -0.01 | 0.02 |
| | (0.00) | (0.02) | (0.01) | (0.03) |
| | | | | |
| Control mean | 0.03 | 0.72 | 0.12 | 0.79 |
| Control SD | 0.08 | 0.42 | 0.24 | 0.28 |
| *p*-value (all three equal) | 0.203 | 0.575 | 0.255 | 0.336 |
| Observations | 2,595 | 2,595 | 2,228 | 643 |
| **Panel B. Malawi** | | | | |
| *Pooled cash treatment:* | | | | |
| Cash | -0.01 | 0.00 | -0.00 | -0.01 |
| | (0.00) | (0.02) | (0.01) | (0.01) |
| *Individual treatments by cash amount:* | | | | |
| Cash 250 | 0.00 | -0.03 | -0.00 | -0.02 |
| | (0.01) | (0.02) | (0.01) | (0.02) |
| Cash 500 | -0.01*** | 0.02 | -0.02 | 0.01 |
| | (0.01) | (0.02) | (0.01) | (0.01) |
| Cash 750 | -0.00 | 0.01 | 0.01 | -0.01 |
| | (0.01) | (0.03) | (0.01) | (0.02) |
| | | | | |
| Control mean | 0.05 | 0.71 | 0.18 | 0.91 |
| Control SD | 0.12 | 0.40 | 0.28 | 0.18 |
| *p*-value (all three equal) | 0.050 | 0.179 | 0.147 | 0.140 |
| Observations | 2,784 | 2,784 | 2,516 | 966 |
| **Panel C. Pooled** | | | | |
| *Pooled cash treatment:* | | | | |
| Cash | -0.00 | 0.02** | 0.00 | -0.01 |
| | (0.00) | (0.01) | (0.01) | (0.01) |
| *Individual treatments by cash amount* | | | | |
| Cash 250 | 0.01 | 0.00 | 0.00 | -0.03 |
| | (0.00) | (0.02) | (0.01) | (0.02) |
| Cash 500 | -0.01 | 0.04** | -0.00 | 0.01 |
| | (0.00) | (0.02) | (0.01) | (0.01) |
| Cash 750 | -0.00 | 0.03** | 0.00 | 0.00 |
| | (0.00) | (0.02) | (0.01) | (0.02) |
| | | | | |
| Control mean | 0.04 | 0.71 | 0.15 | 0.86 |
| Control SD | 0.11 | 0.41 | 0.27 | 0.23 |
| *p*-value (all three equal) | 0.059 | 0.131 | 0.925 | 0.187 |
| Observations | 5,379 | 5,379 | 4,744 | 1,609 |

Note: Regressions include baseline measurement, strata fixed effects, and indicator for market access treatment. Standard errors clustered at the village level in parentheses.
[a] Sample restricted to households with any member under 18.
[b] Sample restricted to households with any child under 5.

Table D3: Effects on Health Resilience (Endline)

| | (1) | (2) | (3) | (4) | (5) | (6) | (7) |
|---|---|---|---|---|---|---|---|
| | Number of illnesses per member (past month) | If any HH member sick in the past month: | | | | | |
| | | Proportion of sick members | | | Number of missed | | Expenses on treatment |
| | | treated at all | delayed treatment | not fully treat | work days | school days | |
| **Panel A. Liberia** | | | | | | | |
| *Pooled cash treatment:* | | | | | | | |
| Cash | -0.01 | | -0.02 | -0.01 | 4.02* | 0.12 | 7.52** |
| | (0.01) | | (0.02) | (0.02) | (2.43) | (0.14) | (2.98) |
| *Individual treatments by cash amount:* | | | | | | | |
| Cash 250 | -0.01 | | 0.00 | -0.01 | 5.25* | 0.13 | 10.00* |
| | (0.01) | | (0.03) | (0.03) | (3.18) | (0.24) | (5.41) |
| Cash 500 | 0.01 | | -0.02 | -0.02 | 3.88 | 0.36 | 6.37 |
| | (0.01) | | (0.03) | (0.02) | (4.09) | (0.24) | (4.56) |
| Cash 750 | -0.02* | | -0.05* | -0.01 | 2.78 | -0.19 | 6.16 |
| | (0.01) | | (0.03) | (0.03) | (3.11) | (0.13) | (4.08) |
| | | | | | | | |
| Control mean | 0.10 | | 0.10 | 0.91 | 11.85 | 0.29 | 14.73 |
| Control SD | 0.20 | | 0.29 | 0.27 | 25.38 | 1.41 | 32.45 |
| *p*-value (all three equal) | 0.175 | | 0.409 | 0.990 | 0.813 | 0.098 | 0.820 |
| Observations | 2,595 | | 704 | 704 | 704 | 704 | 704 |
| | | | | | | | |
| **Panel B. Malawi** | | | | | | | |
| *Pooled cash treatment:* | | | | | | | |
| Cash | -0.01 | -0.00 | -0.00 | 0.00 | -5.64 | 0.27 | 0.09 |
| | (0.01) | (0.02) | (0.00) | (0.01) | (5.75) | (0.62) | (0.20) |
| *Individual treatments by cash amount:* | | | | | | | |
| Cash 250 | -0.00 | 0.01 | -0.00 | -0.00 | -11.55* | -0.15 | -0.14 |
| | (0.02) | (0.02) | (0.01) | (0.01) | (6.55) | (0.79) | (0.29) |
| Cash 500 | -0.01 | -0.02 | 0.00 | 0.02* | -1.29 | 0.49 | 0.28 |
| | (0.02) | (0.02) | (0.01) | (0.01) | (8.26) | (0.82) | (0.30) |
| Cash 750 | -0.00 | 0.00 | -0.01 | -0.01 | -3.87 | 0.48 | 0.13 |
| | (0.01) | (0.02) | (0.01) | (0.01) | (7.92) | (0.98) | (0.26) |
| | | | | | | | |
| Control mean | 0.22 | 0.87 | 0.01 | 0.96 | 28.55 | 6.61 | 1.81 |
| Control SD | 0.27 | 0.30 | 0.11 | 0.16 | 111.63 | 11.71 | 3.30 |
| *p*-value (all three equal) | 0.876 | 0.673 | 0.403 | 0.104 | 0.423 | 0.750 | 0.512 |
| Observations | 2,784 | 1,495 | 1,495 | 1,495 | 1,495 | 1,495 | 1,495 |
| | | | | | | | |
| **Panel C. Pooled** | | | | | | | |
| *Pooled cash treatment:* | | | | | | | |
| Cash | -0.01 | -0.00 | -0.01 | -0.00 | -2.30 | 0.22 | 2.55** |
| | (0.01) | (0.02) | (0.01) | (0.01) | (4.00) | (0.43) | (1.00) |
| *Individual treatments by cash amount* | | | | | | | |
| Cash 250 | -0.01 | 0.01 | -0.00 | -0.01 | -6.50 | -0.07 | 2.94* |
| | (0.01) | (0.02) | (0.01) | (0.01) | (4.71) | (0.55) | (1.72) |
| Cash 500 | -0.00 | -0.02 | -0.00 | 0.01 | 0.89 | 0.46 | 2.46 |
| | (0.01) | (0.02) | (0.01) | (0.01) | (5.74) | (0.55) | (1.57) |
| Cash 750 | -0.01 | 0.00 | -0.02* | -0.01 | -1.31 | 0.28 | 2.23* |
| | (0.01) | (0.02) | (0.01) | (0.01) | (5.64) | (0.70) | (1.19) |
| | | | | | | | |
| Control mean | 0.16 | 0.87 | 0.04 | 0.94 | 22.87 | 4.46 | 6.20 |
| Control SD | 0.25 | 0.30 | 0.19 | 0.21 | 92.20 | 10.00 | 20.06 |
| *p*-value (all three equal) | 0.684 | 0.673 | 0.344 | 0.394 | 0.437 | 0.710 | 0.934 |
| Observations | 5,379 | 1,495 | 2,199 | 2,199 | 2,199 | 2,199 | 2,199 |

Note: Regressions include baseline measurement, strata fixed effects, and indicator for market access treatment. Standard errors clustered at the village level in parentheses.

## Table D4: Effects on Education (Endline)

| | (1) | (2) | (3) | (4) | (5) |
|---|---|---|---|---|---|
| | | | Missed school days (past year) | | |
| | Proportion of children enrolled | Education expenditure (past 6 months) | for any reason | due to lack of money | Proportion of school days attended (past week) |
| **Panel A. Liberia** | | | | | |
| *Pooled cash treatment:* | | | | | |
| Cash | 0.10*** | 8.92*** | -3.59* | -1.43** | 0.07** |
| | (0.02) | (2.36) | (1.94) | (0.60) | (0.03) |
| *Individual treatments by cash amount:* | | | | | |
| Cash 250 | 0.05 | 7.66* | -6.22*** | -2.17*** | 0.07* |
| | (0.03) | (3.89) | (2.22) | (0.67) | (0.04) |
| Cash 500 | 0.11*** | 11.57*** | -1.94 | -1.18 | 0.07** |
| | (0.03) | (3.49) | (2.48) | (0.75) | (0.04) |
| Cash 750 | 0.13*** | 7.38** | -2.83 | -0.99 | 0.06* |
| | (0.03) | (3.22) | (2.89) | (0.93) | (0.03) |
| | | | | | |
| Control mean | 0.52 | 24.71 | 12.24 | 3.43 | 0.89 |
| Control SD | 0.45 | 48.16 | 43.64 | 14.12 | 0.28 |
| *p*-value (all three equal) | 0.104 | 0.578 | 0.192 | 0.272 | 0.933 |
| Observations | 1,871 | 1,871 | 1,876 | 1,876 | 245 |
| **Panel B. Malawi** | | | | | |
| *Pooled cash treatment:* | | | | | |
| Cash | -0.01 | -0.41 | -0.76 | -0.30* | 0.01 |
| | (0.01) | (0.93) | (0.57) | (0.16) | (0.01) |
| *Individual treatments by cash amount:* | | | | | |
| Cash 250 | -0.02 | -0.36 | -0.38 | -0.06 | 0.03** |
| | (0.01) | (1.54) | (0.90) | (0.23) | (0.01) |
| Cash 500 | -0.01 | -1.35 | -1.15 | -0.43** | -0.01 |
| | (0.01) | (1.03) | (0.74) | (0.17) | (0.02) |
| Cash 750 | -0.01 | 0.48 | -0.75 | -0.40** | 0.02 |
| | (0.01) | (1.21) | (0.75) | (0.17) | (0.01) |
| | | | | | |
| Control mean | 0.93 | 10.78 | 7.28 | 0.99 | 0.91 |
| Control SD | 0.20 | 22.66 | 13.11 | 4.14 | 0.22 |
| *p*-value (all three equal) | 0.819 | 0.342 | 0.740 | 0.234 | 0.069 |
| Observations | 2,158 | 2,158 | 2,158 | 2,158 | 1,757 |
| **Panel C. Pooled** | | | | | |
| *Pooled cash treatment:* | | | | | |
| Cash | 0.04*** | 3.93*** | -2.09** | -0.82*** | 0.02* |
| | (0.01) | (1.23) | (0.96) | (0.29) | (0.01) |
| *Individual treatments by cash amount* | | | | | |
| Cash 250 | 0.01 | 3.25 | -3.04*** | -1.02*** | 0.03*** |
| | (0.02) | (1.98) | (1.15) | (0.34) | (0.01) |
| Cash 500 | 0.05*** | 4.78*** | -1.54 | -0.79** | -0.00 |
| | (0.02) | (1.77) | (1.22) | (0.36) | (0.01) |
| Cash 750 | 0.06*** | 3.74** | -1.73 | -0.67 | 0.02* |
| | (0.02) | (1.64) | (1.41) | (0.45) | (0.01) |
| | | | | | |
| Control mean | 0.74 | 17.33 | 9.61 | 2.14 | 0.90 |
| Control SD | 0.40 | 37.55 | 31.50 | 10.21 | 0.23 |
| *p*-value (all three equal) | 0.094 | 0.801 | 0.454 | 0.689 | 0.110 |
| Observations | 4,029 | 4,029 | 4,034 | 4,034 | 2,002 |

Note: Sample restricted to households with any school-aged children (age 6-18). Regressions include baseline measurement, strata fixed effects, and indicator for market access treatment. Standard errors clustered at the village level in parentheses. Nonbinary outcomes are Winsorized at the 99th percentile.

## Table D5: Effects on Social Capital (Endline)

| | (1) | (2) | (3) | (4) |
|---|---|---|---|---|
| | | | During difficult times,[a] | |
| | =1 if your household could depend on: | | =1 if the following could depend on your household: | |
| | relatives | non-relatives | relatives | non-relatives |
| **Panel A. Liberia** | | | | |
| *Pooled cash treatment:* | | | | |
| Cash | 0.03 | 0.03 | 0.03 | 0.04 |
| | (0.02) | (0.02) | (0.02) | (0.02) |
| *Individual treatments by cash amount:* | | | | |
| Cash 250 | 0.01 | 0.03 | 0.01 | 0.04 |
| | (0.03) | (0.03) | (0.03) | (0.03) |
| Cash 500 | 0.02 | -0.00 | 0.03 | 0.01 |
| | (0.03) | (0.03) | (0.03) | (0.03) |
| Cash 750 | 0.07** | 0.05* | 0.06* | 0.06* |
| | (0.03) | (0.03) | (0.03) | (0.03) |
| | | | | |
| Control mean | 0.60 | 0.36 | 0.64 | 0.45 |
| Control SD | 0.49 | 0.48 | 0.48 | 0.50 |
| *p*-value (all three equal) | 0.185 | 0.362 | 0.498 | 0.432 |
| Observations | 2,594 | 2,590 | 2,592 | 2,588 |
| **Panel B. Malawi** | | | | |
| *Pooled cash treatment:* | | | | |
| Cash | 0.00 | 0.02 | 0.04* | 0.01 |
| | (0.02) | (0.02) | (0.02) | (0.02) |
| *Individual treatments by cash amount:* | | | | |
| Cash 250 | 0.03 | 0.03 | 0.06** | 0.02 |
| | (0.03) | (0.03) | (0.03) | (0.02) |
| Cash 500 | -0.03 | 0.01 | 0.02 | 0.02 |
| | (0.03) | (0.03) | (0.03) | (0.03) |
| Cash 750 | 0.01 | 0.03 | 0.03 | -0.02 |
| | (0.03) | (0.02) | (0.03) | (0.03) |
| | | | | |
| Control mean | 0.52 | 0.28 | 0.58 | 0.36 |
| Control SD | 0.50 | 0.45 | 0.49 | 0.48 |
| *p*-value (all three equal) | 0.196 | 0.756 | 0.397 | 0.377 |
| Observations | 2,783 | 2,777 | 2,781 | 2,764 |
| **Panel C. Pooled** | | | | |
| *Pooled cash treatment:* | | | | |
| Cash | 0.02 | 0.02* | 0.04** | 0.02 |
| | (0.01) | (0.01) | (0.01) | (0.02) |
| *Individual treatments by cash amount* | | | | |
| Cash 250 | 0.02 | 0.03 | 0.04* | 0.03 |
| | (0.02) | (0.02) | (0.02) | (0.02) |
| Cash 500 | -0.01 | 0.00 | 0.03 | 0.01 |
| | (0.02) | (0.02) | (0.02) | (0.02) |
| Cash 750 | 0.04* | 0.04** | 0.04* | 0.02 |
| | (0.02) | (0.02) | (0.02) | (0.02) |
| | | | | |
| Control mean | 0.56 | 0.32 | 0.61 | 0.40 |
| Control SD | 0.50 | 0.47 | 0.49 | 0.49 |
| *p*-value (all three equal) | 0.208 | 0.293 | 0.837 | 0.799 |
| Observations | 5,377 | 5,367 | 5,373 | 5,352 |

Note: Regressions include baseline measurement, strata fixed effects, and indicator for market access treatment. Standard errors clustered at the village level in parentheses.

[a] Assistance includes financial or food support. Examples of difficult times include: loss of a family member, loss of income, hunger, drought, flood, conflict or similar events.

Table D6: Effects on Public Goods Contributions (Endline)

| | (1) | (2) | (3) |
| --- | --- | --- | --- |
| | For community service activities (past 12 months)[a] | | |
| | Number of labor hours contributed | Cash contributions | Value of in-kind contributions |
| **Panel A. Liberia** | | | |
| *Pooled cash treatment:* | | | |
| Cash | 1.25 | 0.02 | 0.03 |
| | (1.09) | (0.02) | (0.03) |
| *Individual treatments by cash amount:* | | | |
| Cash 250 | 1.83 | -0.01 | 0.00 |
| | (1.69) | (0.02) | (0.04) |
| Cash 500 | 2.75 | 0.05* | 0.06 |
| | (1.78) | (0.03) | (0.04) |
| Cash 750 | -0.84 | 0.03 | 0.03 |
| | (1.17) | (0.03) | (0.04) |
| | | | |
| Control mean | 6.59 | 0.10 | 0.14 |
| Control SD | 20.56 | 0.44 | 0.70 |
| *p*-value (all three equal) | 0.095 | 0.198 | 0.467 |
| Observations | 2,595 | 2,595 | 2,595 |
| **Panel B. Malawi** | | | |
| *Pooled cash treatment:* | | | |
| Cash | 0.19 | 0.00 | -0.00 |
| | (0.52) | (0.00) | (0.00) |
| *Individual treatments by cash amount:* | | | |
| Cash 250 | 0.30 | -0.00 | -0.00 |
| | (0.68) | (0.00) | (0.00) |
| Cash 500 | -0.18 | 0.00 | -0.00 |
| | (0.74) | (0.00) | (0.00) |
| Cash 750 | 0.45 | 0.00 | -0.00 |
| | (0.76) | (0.00) | (0.00) |
| | | | |
| Control mean | 2.89 | 0.01 | 0.00 |
| Control SD | 12.67 | 0.07 | 0.03 |
| *p*-value (all three equal) | 0.770 | 0.156 | 0.756 |
| Observations | 2,784 | 2,784 | 2,784 |
| **Panel C. Pooled** | | | |
| *Pooled cash treatment:* | | | |
| Cash | 0.70 | 0.01 | 0.02 |
| | (0.60) | (0.01) | (0.01) |
| *Individual treatments by cash amount* | | | |
| Cash 250 | 1.04 | -0.00 | 0.00 |
| | (0.89) | (0.01) | (0.02) |
| Cash 500 | 1.21 | 0.03* | 0.03 |
| | (0.95) | (0.01) | (0.02) |
| Cash 750 | -0.16 | 0.01 | 0.02 |
| | (0.70) | (0.02) | (0.02) |
| | | | |
| Control mean | 4.68 | 0.05 | 0.07 |
| Control SD | 17.06 | 0.31 | 0.49 |
| *p*-value (all three equal) | 0.291 | 0.115 | 0.462 |
| Observations | 5,379 | 5,379 | 5,379 |

Note: Regressions include strata fixed effects, and indicator for market access treatment. Standard errors clustered at the village level in parentheses. Winsorized at the 99th percentile. Monetary values in USD.

[a] Cleaning/maintaining or repairing/building of: road/neighbourhood/bridge; schools; clean water/bathing, washing, sanitary facilities; irrigation canal/weir; house of worship/cemetery; village/neighbourhood facilities (meeting hall, office, gate, sports field); poor people dwellings; health facility.

Table D7: Effects on Child Anthropometrics (Endline survey, Malawi only)

|  | (1)<br>Height for age | (2)<br>Weight for age | (3)<br>MUAC for age |
|---|---|---|---|
| *Pooled cash treatment:* |  |  |  |
| Cash | 0.09 | -0.00 | 0.02 |
|  | (0.09) | (0.06) | (0.06) |
| *Individual treatments by cash amount:* |  |  |  |
| Cash 250 | 0.02 | 0.03 | 0.09 |
|  | (0.11) | (0.09) | (0.08) |
| Cash 500 | 0.09 | -0.08 | -0.09 |
|  | (0.15) | (0.07) | (0.08) |
| Cash 750 | 0.17 | 0.03 | 0.05 |
|  | (0.14) | (0.09) | (0.08) |
|  |  |  |  |
| Control mean | -1.63 | -0.52 | -0.30 |
| Control SD | 1.54 | 1.04 | 0.99 |
| *p*-value (all three equal) | 0.660 | 0.384 | 0.110 |
| Observations | 1,488 | 1,488 | 1,479 |

Note: Sample to restricted to children under 5. All measures are standardized z-scores using means and standard deviations from *WHO Child Growth Standards*. Regressions include strata fixed effects, and indicator for market access treatment. Standard errors clustered at the village level in parentheses. ***, **, and * represent significance at 1%, 5%, and 10%, respectively.

Table D8: Child Anthropometrics - by child age at first cash payments (Endline survey, Malawi only)

| | Height for age | | Weight for age | | MUAC for age | |
|---|---|---|---|---|---|---|
| Cash | -0.01 | 0.08 | 0.36 | -0.04 | 0.02 | -0.01 |
| | (0.49) | (0.14) | (0.29) | (0.09) | (0.23) | (0.08) |
| Cash × -2 | 0.18 | | -0.60* | | -0.08 | |
| | (0.51) | | (0.33) | | (0.25) | |
| Cash × -1 | 0.03 | | -0.29 | | 0.06 | |
| | (0.52) | | (0.31) | | (0.26) | |
| Cash × 0 | 0.07 | | -0.40 | | -0.04 | |
| | (0.51) | | (0.30) | | (0.24) | |
| Cash × 1 | 0.18 | | -0.29 | | 0.06 | |
| | (0.50) | | (0.30) | | (0.25) | |
| Cash × 2 | -0.11 | | -0.46 | | -0.08 | |
| | (0.56) | | (0.32) | | (0.28) | |
| Cash × Age (continuous) | | 0.01 | | 0.03 | | 0.02 |
| | | (0.07) | | (0.05) | | (0.04) |
| | | | | | | |
| Control mean | -1.63 | -1.63 | -0.52 | -0.52 | -0.30 | -0.30 |
| Control SD | 1.54 | 1.54 | 1.04 | 1.04 | 0.99 | 0.99 |
| Observations | 1,488 | 1,488 | 1,488 | 1,488 | 1,479 | 1,479 |

Note: Sample to restricted to children under 5. All measures are standardized z-scores using means and standard deviations from *WHO Child Growth Standards*. Regressions include strata fixed effects, and indicator for market access treatment. Standard errors clustered at the village level in parentheses. ***, **, and * represent significance at 1%, 5%, and 10%, respectively.

# Appendix E

## Effects of Lump-sum vs. Flow Payments

Figure E1: Flow Payment Effects on Food Security Over Time, Lump vs. Flow

(a) Household Dietary Diversity Score
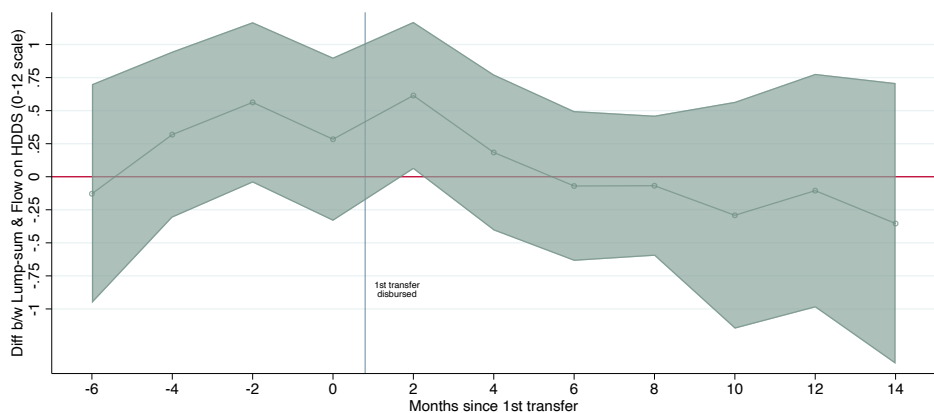


(b) Food Consumption Score
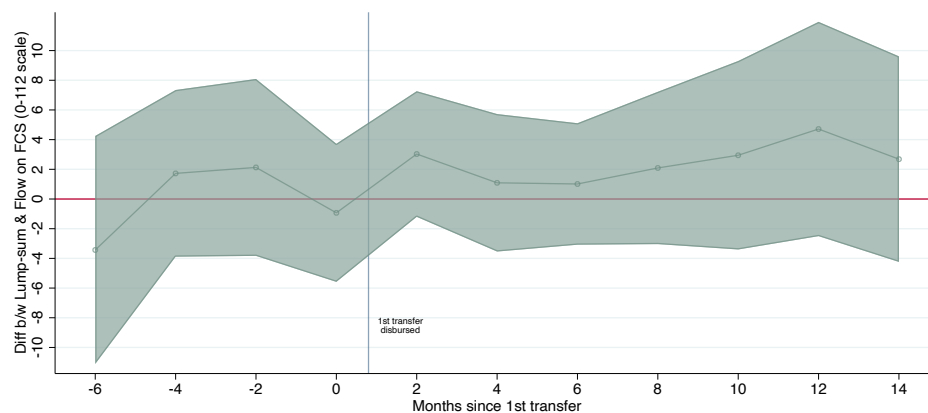


(c) Household Hunger Scale
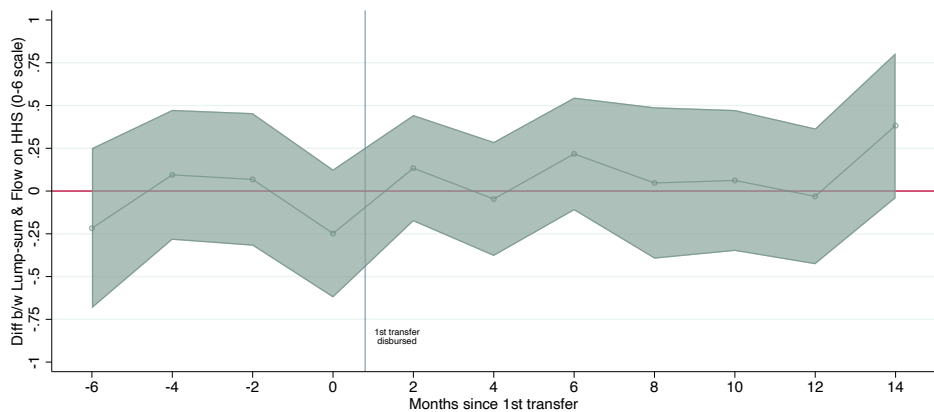


(d) Food Security Index (z-score)
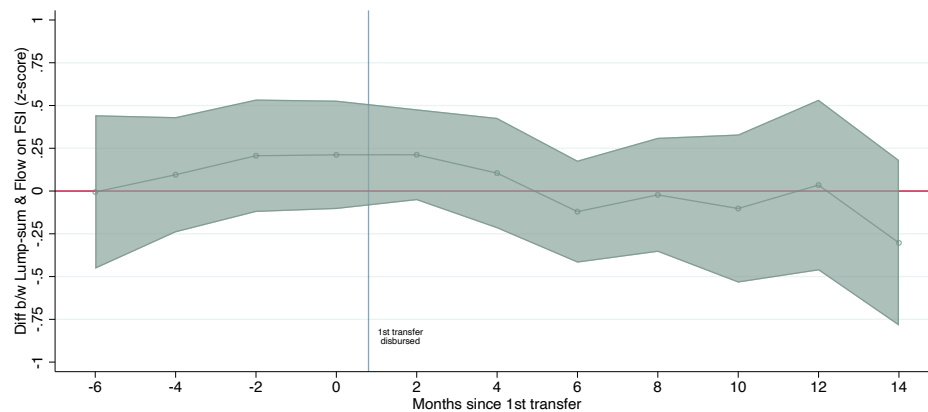


Note: Regressions include baseline measurement of outcome and strata fixed effects. Standard errors clustered at village level. In panel (d), outcome variable is the re-standardized z-score of HDDS, FCS, and HHS (negatively weighted) per Anderson (2008).

# Figure E2: Flow Payment Effects on Expenditures Over Time, Lump vs. Flow

## (a) Food Expenditures
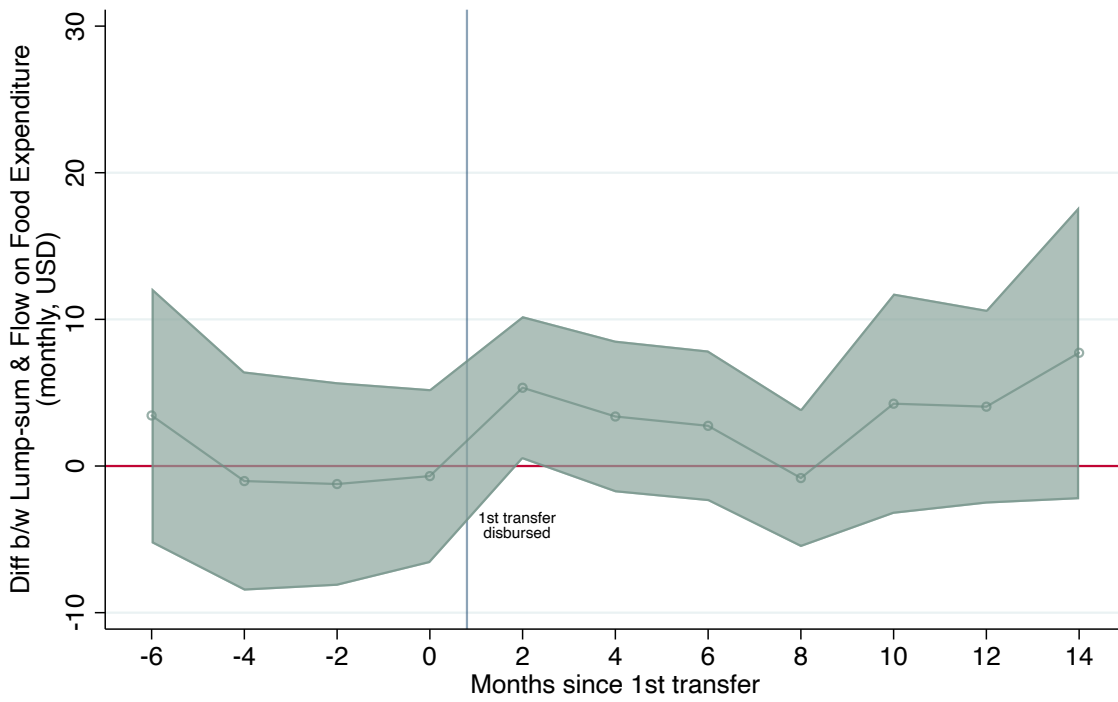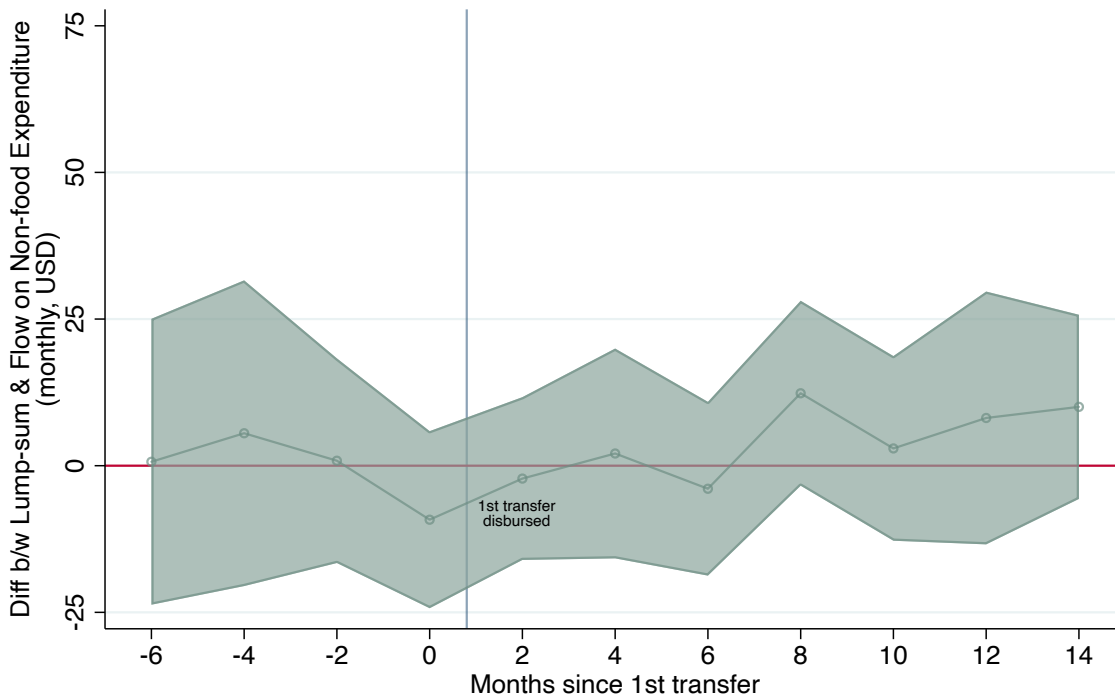


## (b) Non-food Expenditures



Note: Regressions include baseline measurement of outcome and strata fixed effects. Standard errors clustered at village level.

Figure E3: Flow Payment Effects on Non-agricultural Income Over Time, Lump vs. Flow
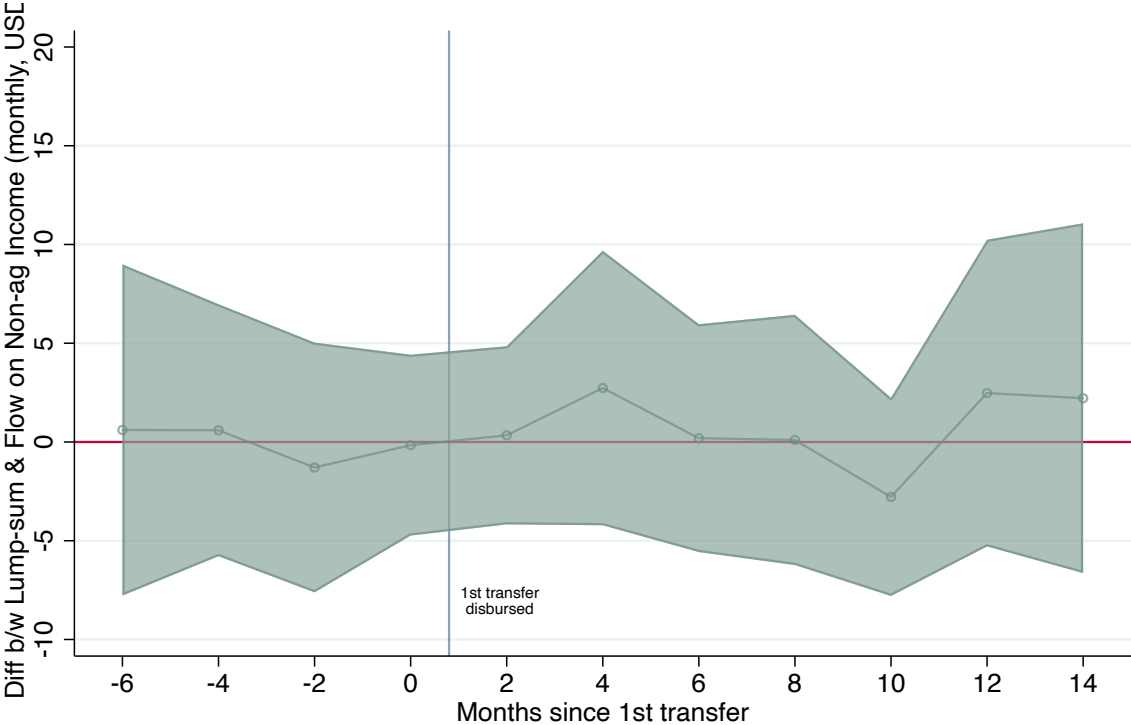


Note: Regressions include baseline measurement of outcome and strata fixed effects. Standard errors clustered at village level.

# Figure E4: Effects on Transfers Sent and Received
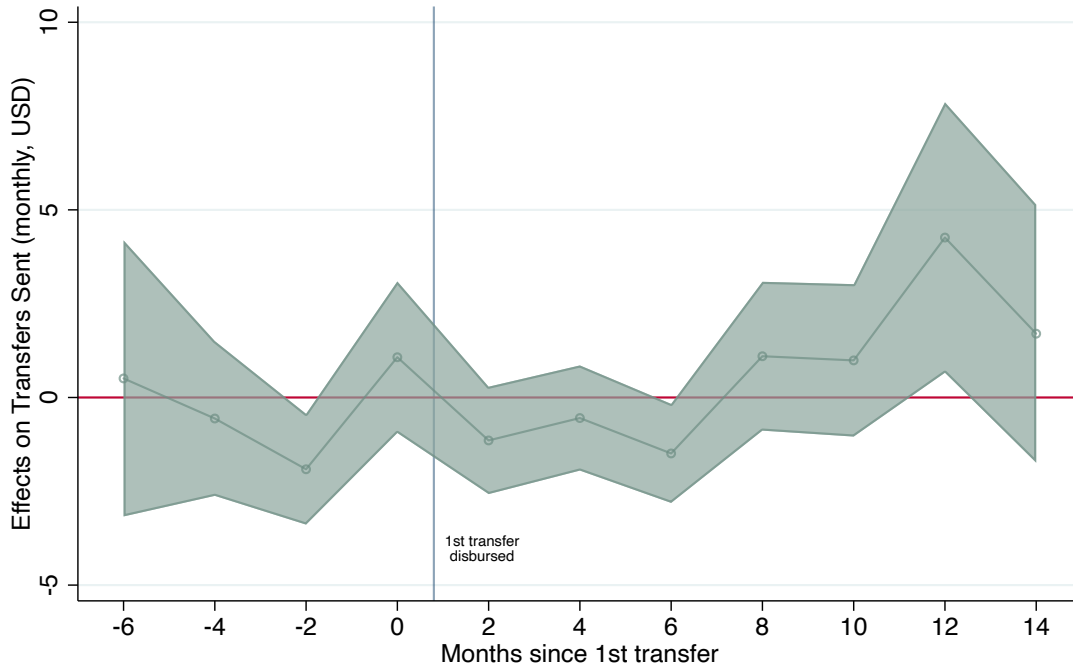
## (a) Transfers Sent (past month)



## (b) Transfers Received (past month)
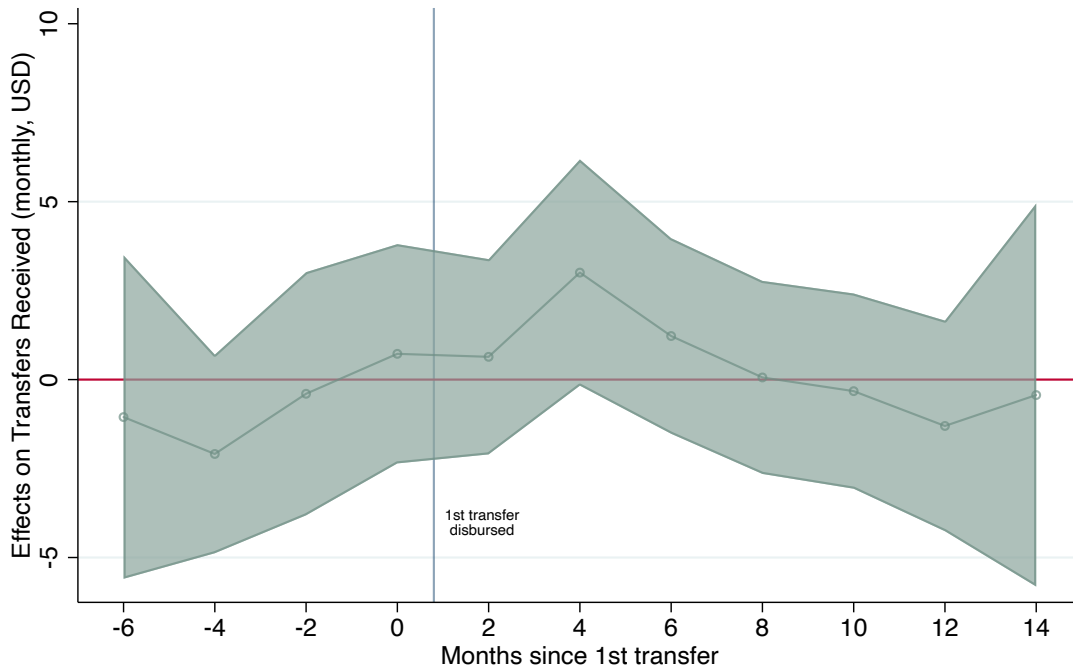


Note: Regressions include baseline measurement of outcome and strata fixed effects. Standard errors clustered at village level.

Table E1: Balance between Lump-sum and Flow within Matched Treatment Group

| | (1) | (2) | (3) | (4) | (5) | (6) |
|---|---|---|---|---|---|---|
| | Liberia Wave 1 | | | Liberia Wave 2 | | |
| | Lump-sum | Flow | $p$-value: difference | Lump-sum | Flow | $p$-value: difference |
| **Panel A. Demographics** | | | | | | |
| =1 if female | 0.82 | 0.83 | 0.839 | 0.75 | 0.76 | 0.739 |
| =1 if currently married or has partner | 0.77 | 0.84 | 0.135 | 0.91 | 0.90 | 0.777 |
| Age | 37.76 | 37.63 | 0.937 | 38.78 | 39.59 | 0.387 |
| | [13.71] | [13.35] | | [13.29] | [13.41] | |
| Years of education | 1.93 | 1.56 | 0.275 | 3.14 | 3.39 | 0.372 |
| | [3.12] | [2.80] | | [3.85] | [3.96] | |
| Number of household members | 4.09 | 4.39 | 0.179 | 4.68 | 4.95 | 0.077* |
| | [1.85] | [2.03] | | [2.08] | [2.23] | |
| | | | | | | |
| **Panel B. Primary outcomes measured at baseline** | | | | | | |
| Food security index (z-score) | -0.45 | -0.43 | 0.858 | 0.20 | 0.16 | 0.488 |
| | [0.91] | [0.94] | | [0.93] | [0.90] | |
| Total expenditure (monthly) | 41.29 | 45.47 | 0.273 | 54.85 | 51.69 | 0.264 |
| | [31.77] | [34.62] | | [42.98] | [37.72] | |
| Food expenditure (monthly) | 18.27 | 22.36 | 0.035** | 20.97 | 19.59 | 0.204 |
| | [16.37] | [17.37] | | [16.25] | [14.78] | |
| Net value of durables, livestock, and financial assets | 66.07 | 44.08 | 0.131 | 132.17 | 115.74 | 0.242 |
| | [158.96] | [81.23] | | [210.49] | [189.96] | |
| Non-agricultural income (monthly) | 5.90 | 6.26 | 0.777 | 9.05 | 8.36 | 0.651 |
| | [10.35] | [11.94] | | [22.83] | [20.15] | |
| =1 if any IPV (past year) | 0.33 | 0.37 | 0.515 | 0.55 | 0.56 | 0.738 |
| Transfers received (monthly) | 10.91 | 11.08 | 0.962 | 10.44 | 16.58 | 0.016** |
| | [17.09] | [14.42] | | [12.54] | [21.82] | |
| Transfers sent (monthly) | 7.12 | 9.67 | 0.521 | 13.29 | 14.90 | 0.601 |
| | [13.70] | [20.99] | | [23.46] | [25.72] | |
| Observations | 151 | 153 | | 393 | 430 | |

Note: Columns 1 and 4 present the mean for the subgroups for which we a match in GiveDirectly's database and are assigned to the lump-sum payment schedule; Columns 2 and 5 report the mean for those in the flow payment schedule; and Columns 3 and 6 report the $p$-values for testing mean difference. Standard deviations are in square brackets. Monetary outcomes are in USD and Winsorized at the 99th percentile. ***, **, and * represent significance at 1%, 5%, and 10%, respectively.

Table E2: First Stage for Lump-sum / Flow Randomization

|  | (1)<br>=1 if enrolled as Flow<br>in GiveDirectly database |
| --- | --- |
| =1 if assigned to Flow | 0.79*** |
|  | (0.02) |
|  |  |
| Assigned to Lump-sum: Mean | 0.10 |
| Observations | 823 |

Note: This table is restricted to Liberia Wave 2 only. ***, **, and * represent significance at 1%, 5%, and 10%, respectively.

Table E3: Difference between Lump-sum and Flow on Food Security, Income, Expenditures and Transfers (measured at Endline)

| | (1) Food Security[a] (past year) | (2) Food Expend (past month) | (3) Non-food Expend (past month) | (4) Non-ag Income[b] (past month) | (5) Transfers Sent (past month) | (6) Transfers Received (past month) |
|---|---|---|---|---|---|---|
| **Panel A. Liberia Wave 1** | | | | | | |
| *Pooled flow effect:* | | | | | | |
| Flow payments | 0.04 | -0.16 | 3.24 | -2.62 | 0.04 | -0.91 |
| | (0.15) | (1.99) | (3.55) | (5.61) | (0.44) | (0.79) |
| *Individual flow effects by cash amount:* | | | | | | |
| Cash 250 in Flow | 0.01 | -0.85 | 13.36* | 5.20 | -0.08 | -1.73 |
| | (0.24) | (4.93) | (6.66) | (4.68) | (1.19) | (1.18) |
| Cash 500 in Flow | 0.36 | 1.36 | -3.35 | -7.97 | -0.15 | -1.72* |
| | (0.22) | (2.46) | (6.13) | (15.09) | (0.49) | (0.92) |
| Cash 750 in Flow | -0.31 | -1.05 | -0.67 | -3.05 | 0.36 | 0.80 |
| | (0.29) | (2.39) | (4.78) | (4.33) | (0.58) | (1.85) |
| | | | | | | |
| Lump-sum: mean | 0.34 | 22.53 | 29.01 | 14.65 | 1.04 | 2.60 |
| Lump-sum: SD | 1.13 | 20.16 | 31.31 | 80.59 | 3.14 | 9.06 |
| *p*-value (all three equal) | 0.172 | 0.776 | 0.149 | 0.414 | 0.794 | 0.467 |
| Observations | 304 | 304 | 304 | 304 | 304 | 304 |
| | | | | | | |
| **Panel B. Liberia Wave 2** | | | | | | |
| *Pooled cash treatment:* | | | | | | |
| Flow payments | 0.07 | 0.01 | 1.27 | 1.30 | 0.16 | 0.54 |
| | (0.08) | (1.49) | (3.05) | (5.13) | (0.40) | (0.68) |
| *Individual flow effects by cash amount:* | | | | | | |
| Cash 250 in Flow | 0.20 | 2.11 | 3.55 | 0.09 | -0.00 | 0.87 |
| | (0.15) | (2.45) | (5.02) | (12.57) | (0.32) | (0.73) |
| Cash 500 in Flow | 0.14 | -2.38 | -2.22 | -5.36 | 0.04 | 1.77* |
| | (0.13) | (3.03) | (5.45) | (6.36) | (0.75) | (0.98) |
| Cash 750 in Flow | -0.10 | 0.65 | 3.26 | 8.44 | 0.64 | -1.02 |
| | (0.11) | (2.03) | (5.27) | (5.67) | (0.89) | (1.73) |
| | | | | | | |
| Lump-sum: mean | 0.26 | 30.09 | 40.07 | 19.34 | 1.50 | 2.12 |
| Lump-sum: SD | 1.08 | 22.77 | 44.96 | 66.57 | 6.11 | 9.72 |
| *p*-value (all three equal) | 0.196 | 0.515 | 0.692 | 0.269 | 0.794 | 0.385 |
| Observations | 823 | 823 | 823 | 823 | 823 | 823 |
| | | | | | | |
| **Panel C. Pooled** | | | | | | |
| *Pooled cash treatment:* | | | | | | |
| Flow payments | 0.06 | -0.05 | 1.75 | 0.09 | 0.12 | 0.16 |
| | (0.07) | (1.18) | (2.43) | (4.06) | (0.31) | (0.54) |
| *Individual flow effects by cash amount* | | | | | | |
| Cash 250 in Flow | 0.15 | 1.44 | 6.11 | 1.46 | -0.09 | 0.20 |
| | (0.13) | (2.21) | (4.14) | (9.38) | (0.37) | (0.64) |
| Cash 500 in Flow | 0.20* | -1.40 | -2.43 | -5.95 | 0.01 | 0.80 |
| | (0.11) | (2.28) | (4.27) | (6.24) | (0.57) | (0.79) |
| Cash 750 in Flow | -0.17 | 0.07 | 2.16 | 4.81 | 0.54 | -0.53 |
| | (0.11) | (1.61) | (4.09) | (4.38) | (0.67) | (1.38) |
| | | | | | | |
| Lump-sum: mean | 0.28 | 27.99 | 37.00 | 18.03 | 1.37 | 2.25 |
| Lump-sum: SD | 1.09 | 22.32 | 41.89 | 70.69 | 5.45 | 9.54 |
| *p*-value (all three equal) | 0.045 | 0.673 | 0.360 | 0.376 | 0.717 | 0.681 |
| Observations | 1,127 | 1,127 | 1,127 | 1,127 | 1,127 | 1,127 |

Note: The endline was conducted about 18-22 months after first transfers were received in Liberia. Regressions include baseline measurement, strata fixed effects, and indicator for market access treatment. Monetary outcomes are in USD and Winsorized at the 99th percentile. Standard errors clustered at the village level in parentheses. ***, **, and * represent significance at 1%, 5%, and 10%, respectively.
[a] Food Security Index is standardized z-score of HDDS, FCS, HHS (negatively weighted), and FIES (negatively weighted), using inverse covariance weighting (Anderson 2008) relative to the control mean and SD in each country.

Table E4: Difference between Lump-sum and Flow on Other Primary Outcomes (at Endline)

| | (1)<br>Non-land<br>Wealth | (2)<br>Any<br>IPV<br>(past year) | (3)<br>Psychological<br>Well-being<br>(past 2 weeks) | (4)<br>Resilience<br>(past year) | (5)<br>Ag Input<br>Purchase<br>(past season) |
|---|---|---|---|---|---|
| **Panel A. Liberia Wave 1** | | | | | |
| *Pooled flow effect:* | | | | | |
| Flow payments | -51.61 | -0.05 | -0.11 | 0.12 | -2.99 |
| | (42.82) | (0.07) | (0.10) | (0.09) | (3.94) |
| *Individual flow effects by cash amount:* | | | | | |
| Cash 250 in Flow | -81.42 | -0.13 | -0.01 | 0.49*** | -4.05 |
| | (74.67) | (0.12) | (0.18) | (0.10) | (3.88) |
| Cash 500 in Flow | 58.88 | -0.13 | -0.02 | 0.05 | 3.55 |
| | (64.59) | (0.12) | (0.20) | (0.16) | (3.14) |
| Cash 750 in Flow | -163.47* | 0.13 | -0.31** | -0.22 | -11.20 |
| | (91.50) | (0.09) | (0.13) | (0.15) | (11.26) |
| | | | | | |
| Lump-sum: mean | 216.53 | 0.40 | 0.39 | 0.02 | 9.19 |
| Lump-sum: SD | 505.24 | 0.49 | 1.09 | 0.75 | 35.98 |
| *p*-value (all three equal) | 0.111 | 0.129 | 0.263 | 0.001 | 0.197 |
| Observations | 304 | 156 | 304 | 304 | 304 |
| | | | | | |
| **Panel B. Liberia Wave 2** | | | | | |
| *Pooled cash treatment:* | | | | | |
| Flow payments | -75.84 | 0.01 | 0.05 | -0.04 | 0.16 |
| | (72.81) | (0.04) | (0.07) | (0.07) | (0.96) |
| *Individual flow effects by cash amount:* | | | | | |
| Cash 250 in Flow | -51.44 | 0.00 | 0.17** | -0.18 | 0.06 |
| | (127.82) | (0.07) | (0.08) | (0.13) | (0.59) |
| Cash 500 in Flow | -134.50 | 0.04 | 0.01 | 0.05 | 0.81 |
| | (145.28) | (0.07) | (0.13) | (0.11) | (2.39) |
| Cash 750 in Flow | -38.71 | -0.00 | 0.00 | -0.00 | 0.06 |
| | (105.01) | (0.08) | (0.13) | (0.11) | (1.42) |
| | | | | | |
| Lump-sum: mean | 571.07 | 0.29 | 0.31 | 0.14 | 3.70 |
| Lump-sum: SD | 1,072.01 | 0.46 | 1.00 | 1.00 | 16.07 |
| *p*-value (all three equal) | 0.856 | 0.906 | 0.425 | 0.372 | 0.955 |
| Observations | 823 | 386 | 823 | 823 | 823 |
| | | | | | |
| **Panel C. Pooled** | | | | | |
| *Pooled cash treatment:* | | | | | |
| Flow payments | -69.81 | -0.00 | 0.01 | 0.00 | -0.60 |
| | (54.51) | (0.04) | (0.06) | (0.06) | (1.20) |
| *Individual flow effects by cash amount* | | | | | |
| Cash 250 in Flow | -55.88 | -0.03 | 0.11 | -0.01 | -1.04 |
| | (95.50) | (0.06) | (0.07) | (0.11) | (1.10) |
| Cash 500 in Flow | -79.20 | -0.01 | 0.01 | 0.05 | 1.81 |
| | (106.58) | (0.06) | (0.11) | (0.09) | (1.89) |
| Cash 750 in Flow | -71.23 | 0.03 | -0.08 | -0.05 | -2.38 |
| | (81.50) | (0.07) | (0.10) | (0.09) | (2.85) |
| | | | | | |
| Lump-sum: mean | 472.66 | 0.32 | 0.33 | 0.10 | 5.22 |
| Lump-sum: SD | 961.98 | 0.47 | 1.03 | 0.94 | 23.45 |
| *p*-value (all three equal) | 0.986 | 0.781 | 0.324 | 0.713 | 0.349 |
| Observations | 1,127 | 542 | 1,127 | 1,127 | 1,127 |

Note: The endline was conducted about 18-22 months after first transfers were received in Liberia and 21-25 months in Malawi. Regressions include baseline measurement, strata fixed effects, and indicator for market access treatment. Monetary outcomes are in USD and Winsorized at the 99th percentile. Standard errors clustered at the village level in parentheses. ***, **, and * represent significance at 1%, 5%, and 10%, respectively.
[a] Includes only women and those for whom IPV was measured in face-to-face interviewing.

# Appendix F

## Prices

Figure F1: Liberia Wave 1: Average Change in Prices of Select Items Relative to Pre-Treatment Level
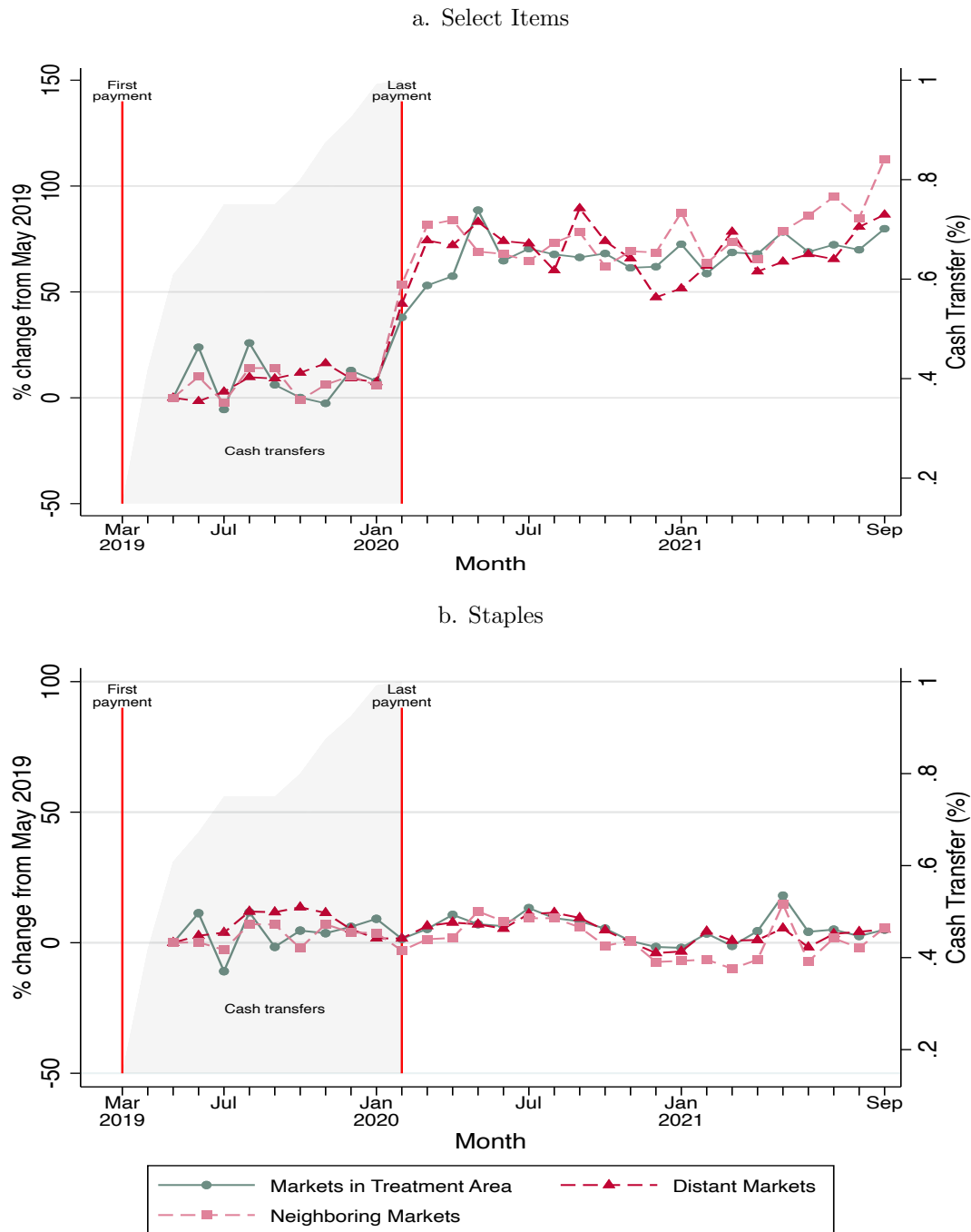
a. Select Items



b. Staples



Note: The figure shows average change in prices relative to prices in May 2019 for Liberia Wave 1. First transfer to treatment households was made across March-May 2019 for Liberia Wave 1.There are 30 markets surveyed in Liberia Wave 1: 11 markets in treatment area, 7 in areas close to the treatment area, and 12 in distant areas. The sub-figure (a) shows the expenditure share weighted price of select items. The list of selected items for Liberia includes: cassava, cassava flour, dried fish, fresh fish, chicken, imported rice, okra, onion, palm oil, and salt. The list of items in staples include: cassava, cassava flour, and imported rice.

## Figure F2: Liberia Wave 1: Dynamic Cash Effects on Prices
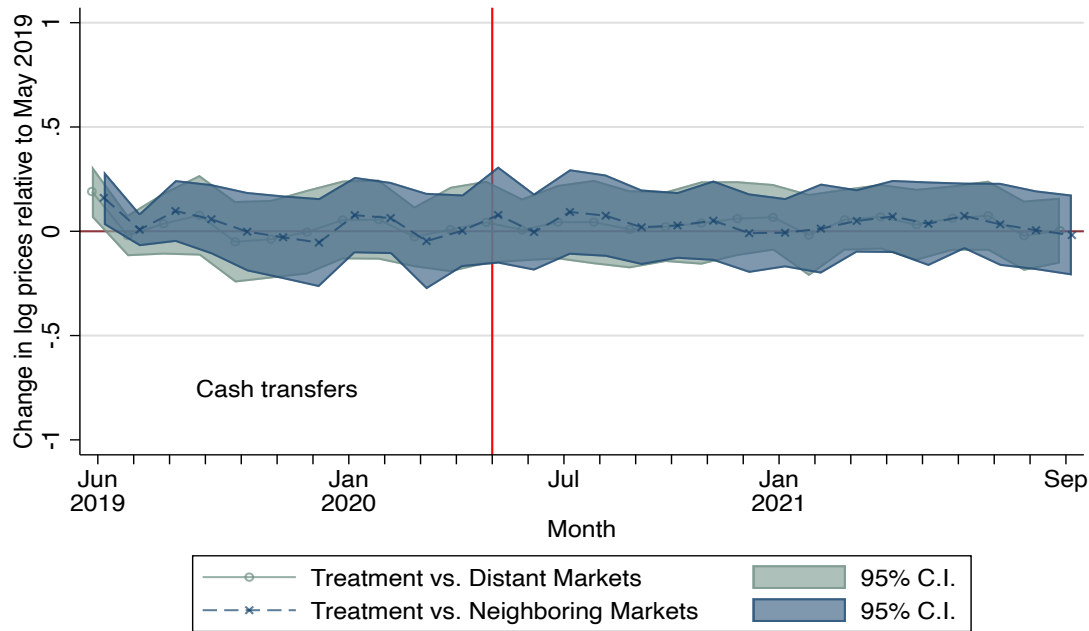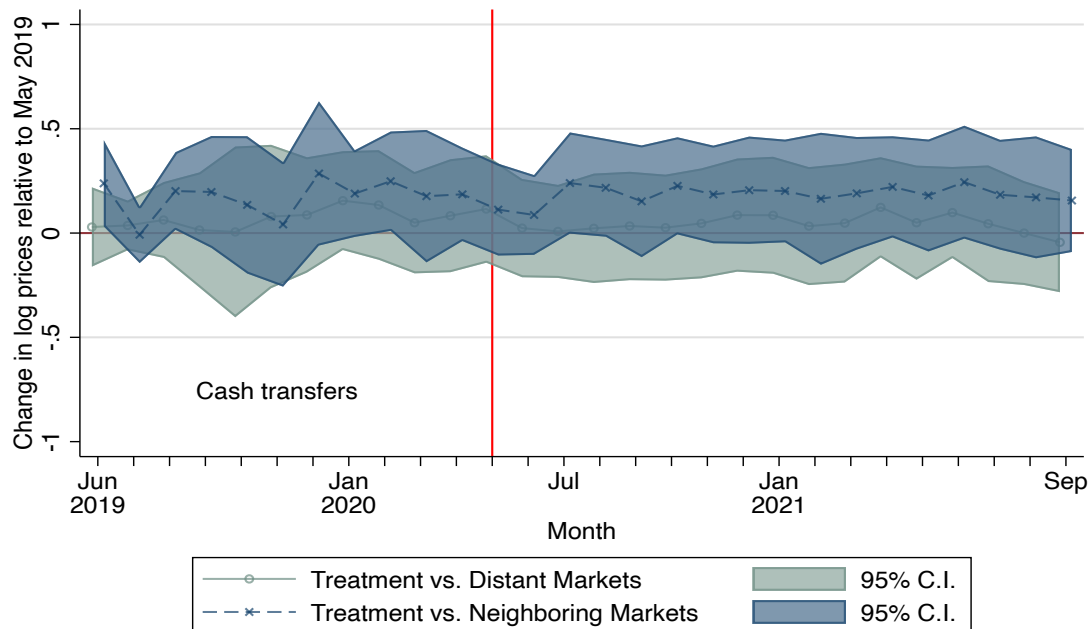
### a. Select Items



### b. Staples



Note: The figure shows average effect on log prices relative to prices in May 2019 for Liberia Wave 1. First transfer to treatment households was made across March-May 2019 for Liberia Wave 1. Regression include calendar month and market-by-item fixed effects. Standard errors clustered at market level. The list of selected items for Liberia includes: cassava, cassava flour, dried fish, fresh fish, chicken, imported rice, okra, onion, palm oil, and salt. The list of items in staples include: cassava, cassava flour, and imported rice.

Figure F3: Liberia Wave 2: Average Change in Prices of Select Items Relative to Pre-Treatment Level

a. Select Items



b. Staples
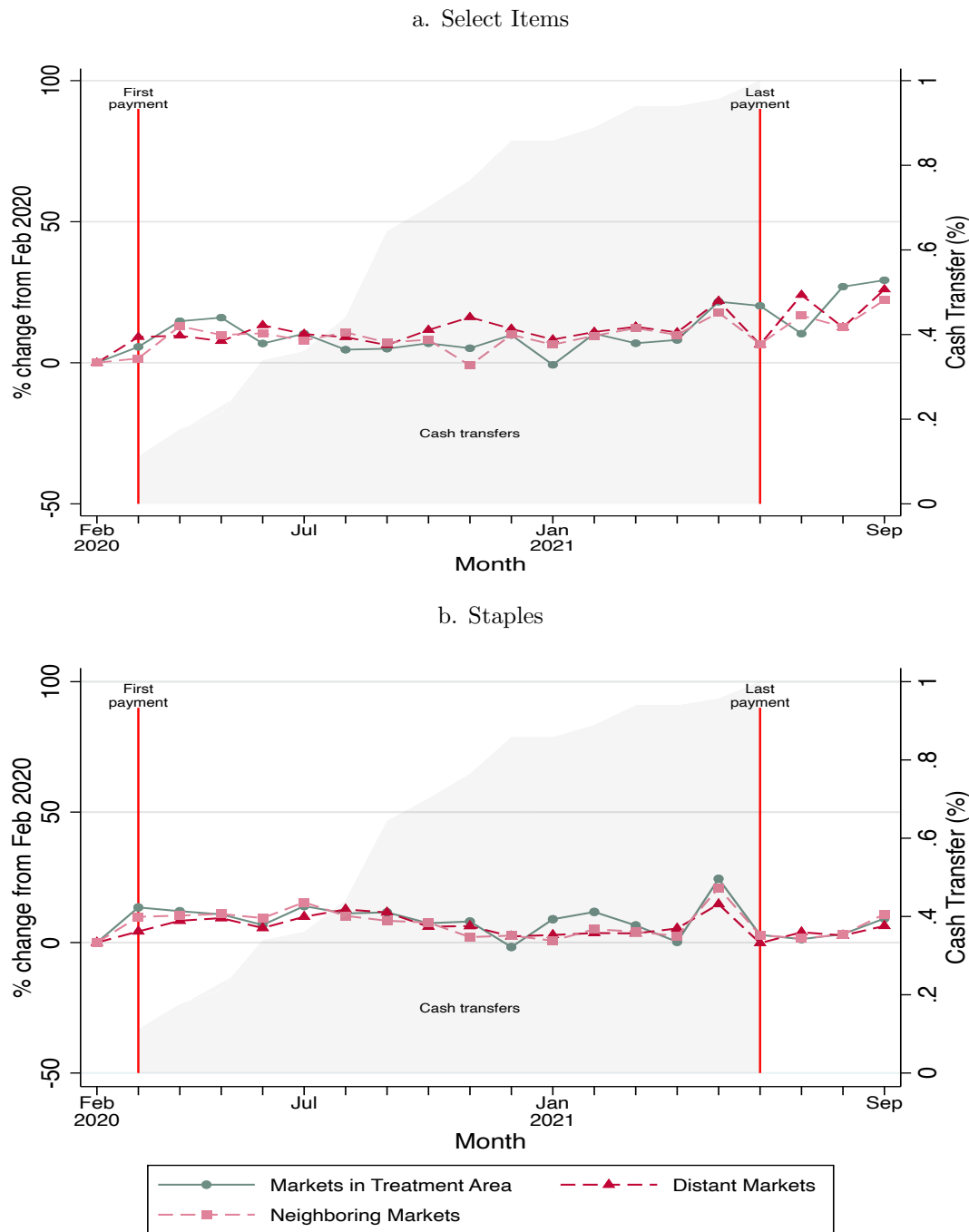


Note: The figure shows average change in prices relative to pre-treatment prices in February 2020 for Liberia Wave 2. First transfer to treatment households was made across March-September 2020 for Liberia Wave 2.There are 50 markets surveyed in Wave 2: 11 markets in treatment area, 22 in areas close to the treated area, and 17 in distant areas. The list of selected items for Liberia includes: cassava, cassava flour, dried fish, fresh fish, chicken, imported rice, okra, onion, palm oil, and salt. The list of items in staples include: cassava, cassava flour, and imported rice.

## Figure F4: Liberia Wave 2: Dynamic Cash Effects on Prices

### a. Select Items
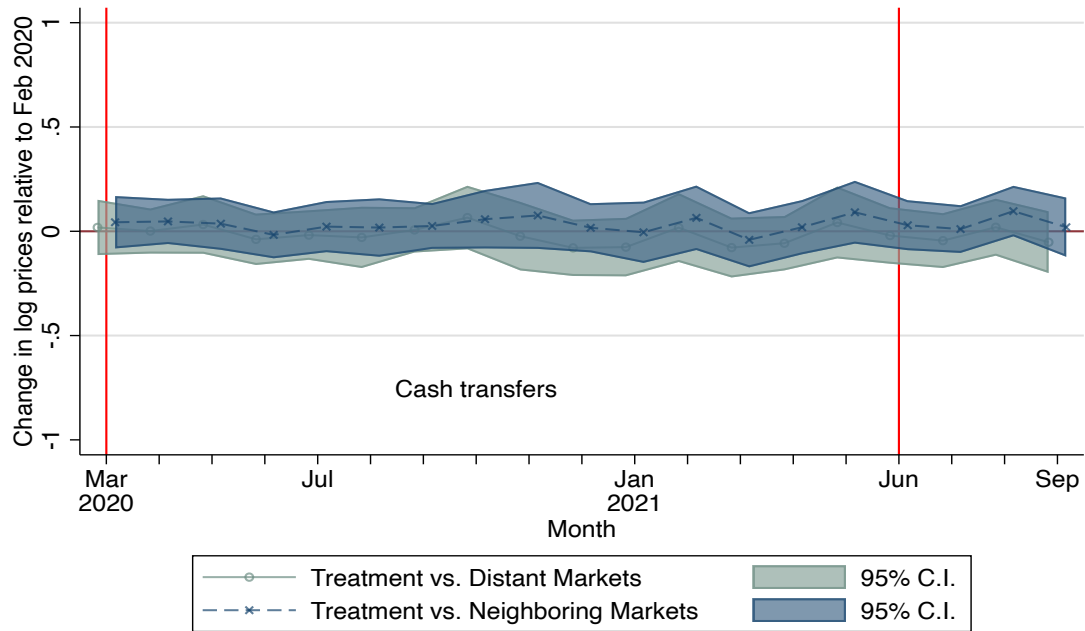


### b. Staples
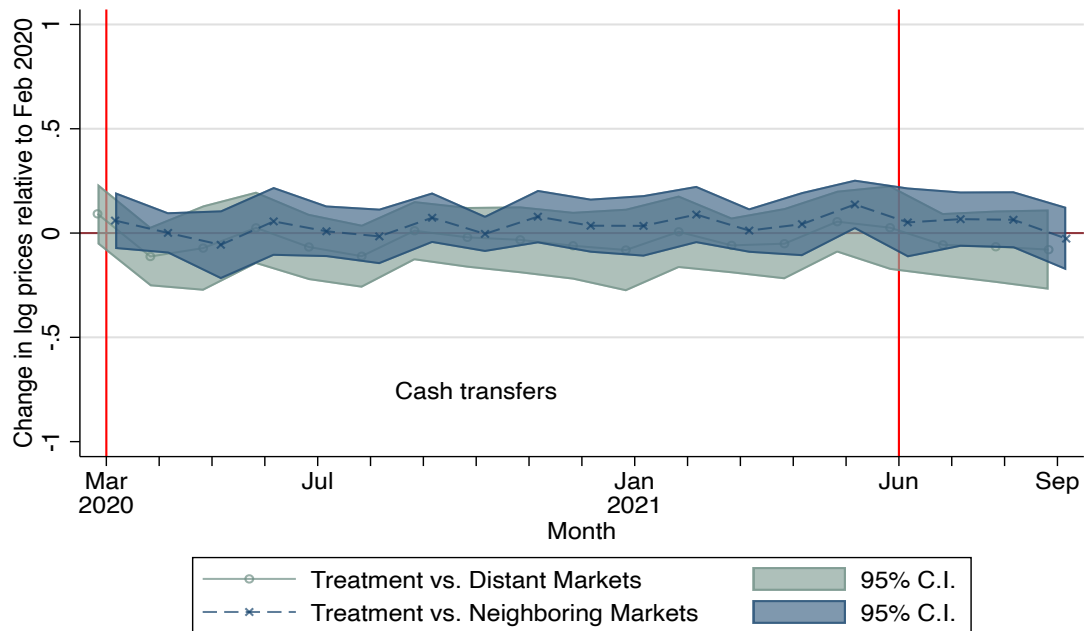


Note: The figure shows average effect on log prices relative to prices in February 2020 for Liberia Wave 2. First transfer to treatment households was made across March-September 2020 for Liberia Wave 2. Regression include calendar month and market fixed effects. Standard errors clustered at market level. The list of selected items for Liberia includes: cassava, cassava flour, dried fish, fresh fish, chicken, imported rice, okra, onion, palm oil, and salt. The list of items in staples include: cassava, cassava flour, and imported rice.

Figure F5: Malawi: Average Change in Prices of Select Items Relative to Pre-Treatment Level

a. Select Items



b. Staples
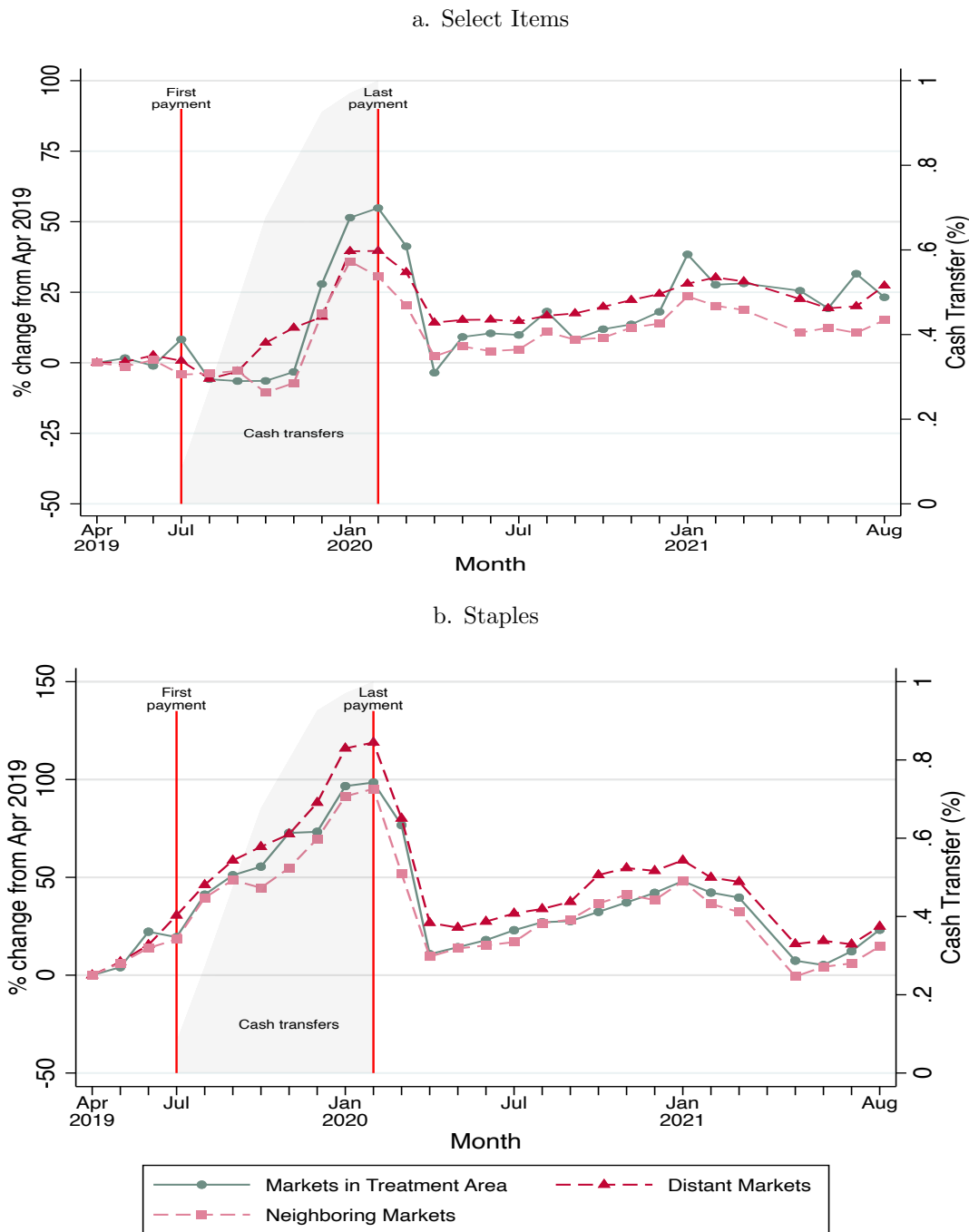


Note: The figure shows average change in prices relative to prices in April 2019. First transfer to treatment households was made across July-October 2019. There are 95 markets surveyed in Malawi: 10 markets in treatment area, 42 in areas close to the treated area, and 43 in distant areas. The list of selected items for Malawi includes: beans, chicken, dried fish, eggs, groundnut, maize flour, maize kernel, onion, salt, sugar, sweet potato, tomato, and unpacked rice. The list of items in staples include: beans, maize flour, maize kernel, and sweet potato.

## Figure F6: Malawi: Dynamic Cash Effects on Prices
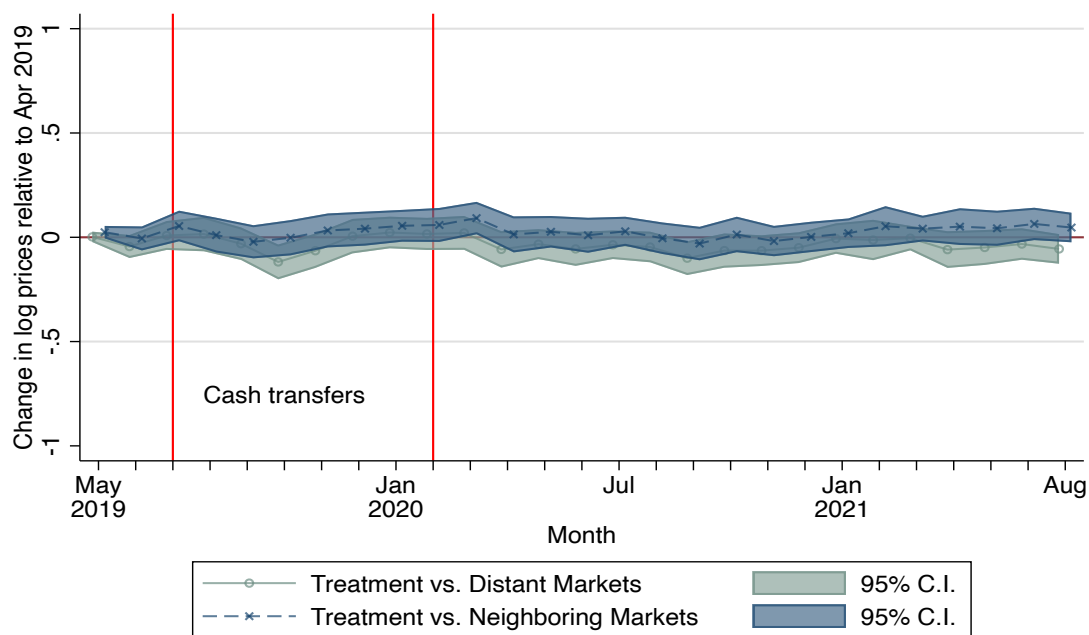
### a. Select Items



### b. Staples
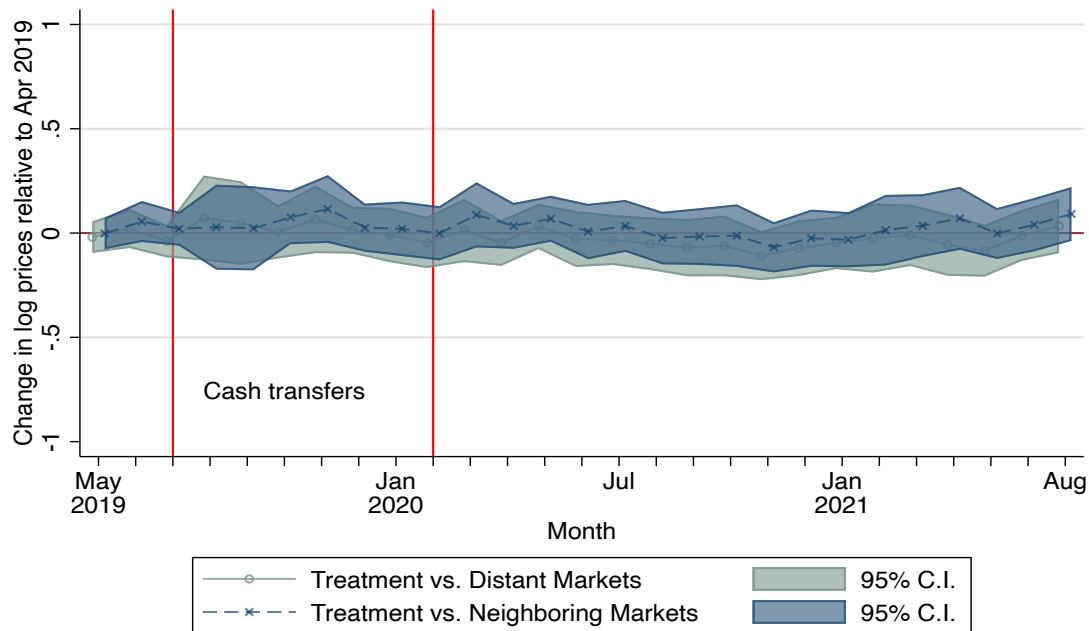


Note: The figure shows average effect on log prices relative to pre-treatment prices in April 2019. First transfer for each treatment household was made across July-October 2019. Regressions include calendar month and market-by-item fixed effects. Standard errors clustered at market level. The list of selected items for Malawi includes: beans, chicken, dried fish, eggs, groundnut, maize flour, maize kernel, onion, salt, sugar, sweet potato, tomato, and unpacked rice. The list of items in staples include: beans, maize flour, maize kernel, and sweet potato.

# Appendix G

## Effects by Subgroups

Table G1: Effects on Food Security Index (Endline Survey), by subgroup

| | (1) | (2) | (3) | (4) | (5) | (6) | (7) |
|---|---|---|---|---|---|---|---|
| | | | | For subgroups defined at baseline: | | | |
| | Entire sample | food insecure | engaged in farming | has any young women | engaged in charcoal production | has any school-aged children | youth-headed |
| **Panel A. Liberia** | | | | | | | |
| *Pooled cash treatment:* | | | | | | | |
| Cash | 0.31*** | 0.24*** | 0.29*** | 0.33*** | 0.27 | 0.34*** | 0.26*** |
| | (0.05) | (0.06) | (0.05) | (0.05) | (0.29) | (0.05) | (0.07) |
| *Individual treatments by cash amount:* | | | | | | | |
| Cash 250 | 0.18*** | 0.10 | 0.13** | 0.22*** | -0.75*** | 0.19*** | 0.17* |
| | (0.06) | (0.09) | (0.06) | (0.07) | (0.19) | (0.07) | (0.10) |
| Cash 500 | 0.28*** | 0.25*** | 0.25*** | 0.30*** | 1.34*** | 0.30*** | 0.23** |
| | (0.06) | (0.07) | (0.07) | (0.07) | (0.38) | (0.07) | (0.11) |
| Cash 750 | 0.47*** | 0.40*** | 0.48*** | 0.48*** | -0.31 | 0.51*** | 0.38*** |
| | (0.06) | (0.09) | (0.05) | (0.07) | (0.29) | (0.07) | (0.10) |
| | | | | | | | |
| Control mean | -0.00 | -0.08 | 0.03 | -0.01 | 0.04 | -0.00 | 0.00 |
| Control SD | 1.00 | 0.96 | 0.99 | 1.00 | 0.90 | 1.00 | 0.97 |
| *p*-value (all three equal) | 0.000 | 0.034 | 0.000 | 0.003 | 0.001 | 0.001 | 0.174 |
| Observations | 2,595 | 1,309 | 2,269 | 1,705 | 40 | 1,627 | 827 |
| **Panel B. Malawi** | | | | | | | |
| *Pooled cash treatment:* | | | | | | | |
| Cash | 0.12*** | 0.02 | 0.11*** | 0.15*** | 0.15 | 0.12*** | 0.13** |
| | (0.04) | (0.05) | (0.04) | (0.04) | (0.41) | (0.04) | (0.06) |
| *Individual treatments by cash amount:* | | | | | | | |
| Cash 250 | 0.06 | -0.00 | 0.06 | 0.08 | -0.13 | 0.11* | -0.01 |
| | (0.05) | (0.06) | (0.05) | (0.05) | (0.65) | (0.06) | (0.08) |
| Cash 500 | 0.12** | 0.08 | 0.11** | 0.18*** | 0.44 | 0.13** | 0.19** |
| | (0.05) | (0.07) | (0.05) | (0.06) | (0.84) | (0.06) | (0.09) |
| Cash 750 | 0.17*** | -0.00 | 0.16*** | 0.19*** | -0.28 | 0.12* | 0.24** |
| | (0.06) | (0.07) | (0.06) | (0.06) | (1.91) | (0.06) | (0.09) |
| | | | | | | | |
| Control mean | 0.00 | -0.22 | 0.01 | -0.01 | 0.70 | -0.02 | 0.03 |
| Control SD | 1.00 | 0.97 | 1.00 | 0.98 | 0.78 | 0.99 | 0.97 |
| *p*-value (all three equal) | 0.268 | 0.500 | 0.285 | 0.175 | 0.884 | 0.935 | 0.043 |
| Observations | 2,784 | 1,429 | 2,753 | 2,209 | 15 | 2,129 | 918 |
| **Panel C. Pooled** | | | | | | | |
| *Pooled cash treatment:* | | | | | | | |
| Cash | 0.21*** | 0.12*** | 0.20*** | 0.23*** | 0.23 | 0.22*** | 0.20*** |
| | (0.03) | (0.04) | (0.03) | (0.03) | (0.24) | (0.03) | (0.05) |
| *Individual treatments by cash amount* | | | | | | | |
| Cash 250 | 0.13*** | 0.04 | 0.10** | 0.15*** | -0.48* | 0.14*** | 0.09 |
| | (0.04) | (0.05) | (0.04) | (0.04) | (0.28) | (0.04) | (0.06) |
| Cash 500 | 0.21*** | 0.16*** | 0.19*** | 0.24*** | 1.02*** | 0.22*** | 0.23*** |
| | (0.04) | (0.05) | (0.04) | (0.05) | (0.35) | (0.05) | (0.07) |
| Cash 750 | 0.31*** | 0.17*** | 0.30*** | 0.31*** | -0.29 | 0.29*** | 0.31*** |
| | (0.04) | (0.06) | (0.04) | (0.05) | (0.33) | (0.05) | (0.07) |
| | | | | | | | |
| Control mean | 0.00 | -0.15 | 0.02 | -0.01 | 0.16 | -0.01 | 0.02 |
| Control SD | 1.00 | 0.97 | 1.00 | 0.99 | 0.91 | 0.99 | 0.97 |
| *p*-value (all three equal) | 0.001 | 0.084 | 0.000 | 0.007 | 0.008 | 0.042 | 0.023 |
| Observations | 5,379 | 2,738 | 5,022 | 3,914 | 55 | 3,756 | 1,745 |

Note: Food Security Index is standardized z-score of HDDS, FCS, HHS (negatively weighted), and FIES (negatively weighted), using inverse covariance weighting (Anderson 2008) relative to the control mean and SD in each country. Regressions include baseline measurement, strata fixed effects, and indicator for market access treatment. Standard errors clustered at the village level in parentheses. ***, **, and * represent significance at 1%, 5%, and 10%, respectively.

Table G2: Effects on Non-food Expenditure (Endline Survey), by subgroup

| | (1) | (2) | (3) | (4) | (5) | (6) | (7) |
|---|---|---|---|---|---|---|---|
| | | For subgroups defined at baseline: | | | | | |
| | Entire sample | food insecure | engaged in farming | has any young women | engaged in charcoal production | has any school-aged children | youth-headed |
| **Panel A. Liberia** | | | | | | | |
| *Pooled cash treatment:* | | | | | | | |
| Cash | 5.91*** | 3.67* | 6.06*** | 5.33*** | -14.49 | 5.70*** | 2.15 |
| | (1.58) | (1.92) | (1.75) | (2.03) | (11.62) | (2.07) | (2.47) |
| *Individual treatments by cash amount:* | | | | | | | |
| Cash 250 | 2.64 | -1.29 | 2.89 | -0.11 | -11.82 | 1.61 | -2.25 |
| | (2.67) | (2.18) | (2.98) | (3.00) | (24.29) | (3.70) | (3.66) |
| Cash 500 | 7.20*** | 4.43 | 7.34*** | 8.34*** | -3.53 | 8.06*** | 1.65 |
| | (2.23) | (2.90) | (2.46) | (3.16) | (13.64) | (2.91) | (3.43) |
| Cash 750 | 7.90*** | 8.74*** | 7.82*** | 7.59*** | -29.93* | 7.05*** | 7.23** |
| | (1.99) | (2.81) | (2.21) | (2.46) | (15.84) | (2.63) | (3.10) |
| | | | | | | | |
| Control mean | 31.63 | 28.10 | 32.78 | 33.28 | 34.16 | 33.86 | 30.23 |
| Control SD | 37.38 | 36.44 | 38.55 | 39.93 | 33.80 | 38.62 | 36.65 |
| *p*-value (all three equal) | 0.205 | 0.003 | 0.314 | 0.043 | 0.399 | 0.309 | 0.062 |
| Observations | 2,595 | 1,309 | 2,269 | 1,705 | 40 | 1,627 | 827 |
| | | | | | | | |
| **Panel B. Malawi** | | | | | | | |
| *Pooled cash treatment:* | | | | | | | |
| Cash | 0.56 | 0.24 | 0.58 | 0.81 | 11.34 | -0.11 | 1.50 |
| | (0.56) | (0.71) | (0.57) | (0.67) | (9.89) | (0.66) | (0.92) |
| *Individual treatments by cash amount:* | | | | | | | |
| Cash 250 | 0.09 | -0.09 | 0.14 | 0.70 | 16.22 | -0.69 | 0.92 |
| | (0.76) | (0.90) | (0.77) | (0.96) | (20.71) | (0.90) | (1.45) |
| Cash 500 | 0.53 | 1.10 | 0.52 | 0.78 | 6.12 | 0.04 | 2.75** |
| | (0.78) | (1.12) | (0.78) | (0.92) | (10.93) | (0.92) | (1.24) |
| Cash 750 | 1.07 | -0.25 | 1.12 | 0.95 | 4.58 | 0.32 | 0.82 |
| | (0.88) | (0.96) | (0.90) | (1.04) | (21.34) | (0.98) | (1.36) |
| | | | | | | | |
| Control mean | 12.29 | 10.89 | 12.29 | 12.76 | 4.89 | 13.43 | 11.56 |
| Control SD | 14.63 | 13.58 | 14.65 | 14.94 | 4.93 | 15.62 | 13.35 |
| *p*-value (all three equal) | 0.642 | 0.531 | 0.646 | 0.980 | 0.130 | 0.655 | 0.425 |
| Observations | 2,784 | 1,429 | 2,753 | 2,209 | 15 | 2,129 | 918 |
| | | | | | | | |
| **Panel C. Pooled** | | | | | | | |
| *Pooled cash treatment:* | | | | | | | |
| Cash | 3.17*** | 1.90* | 3.09*** | 2.81*** | -7.40 | 2.46** | 1.88 |
| | (0.83) | (1.00) | (0.87) | (0.97) | (9.07) | (0.99) | (1.26) |
| *Individual treatments by cash amount* | | | | | | | |
| Cash 250 | 1.36 | -0.73 | 1.41 | 0.40 | -2.21 | 0.37 | -0.52 |
| | (1.35) | (1.17) | (1.40) | (1.42) | (17.04) | (1.66) | (1.87) |
| Cash 500 | 3.79*** | 2.79* | 3.66*** | 4.22*** | -0.37 | 3.61** | 2.26 |
| | (1.16) | (1.56) | (1.20) | (1.53) | (9.79) | (1.41) | (1.77) |
| Cash 750 | 4.39*** | 3.81*** | 4.19*** | 3.77*** | -26.10* | 3.29** | 4.07** |
| | (1.10) | (1.44) | (1.17) | (1.25) | (14.80) | (1.31) | (1.67) |
| | | | | | | | |
| Control mean | 21.68 | 18.97 | 21.63 | 21.73 | 28.93 | 22.32 | 20.32 |
| Control SD | 29.69 | 28.19 | 29.97 | 30.42 | 32.63 | 29.82 | 28.48 |
| *p*-value (all three equal) | 0.144 | 0.008 | 0.218 | 0.067 | 0.200 | 0.215 | 0.109 |
| Observations | 5,379 | 2,738 | 5,022 | 3,914 | 55 | 3,756 | 1,745 |

Note: Regressions include baseline measurement, strata fixed effects, and indicator for market access treatment. Standard errors clustered at the village level in parentheses. ***, **, and * represent significance at 1%, 5%, and 10%, respectively.

Table G3: Effects on Food Expenditure (Endline Survey), by subgroup

| | (1) | (2) | (3) | (4) | (5) | (6) | (7) |
|---|---|---|---|---|---|---|---|
| | | For subgroups defined at baseline: | | | | | |
| | Entire sample | food insecure | engaged in farming | has any young women | engaged in charcoal production | has any school-aged children | youth-headed |

**Panel A. Liberia**
*Pooled cash treatment:*

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Cash | 0.68 | -0.70 | 0.25 | 0.54 | 1.63 | 0.40 | 0.19 |
| | (0.89) | (1.12) | (0.93) | (1.10) | (6.72) | (1.12) | (1.33) |
| *Individual treatments by cash amount:* | | | | | | | |
| Cash 250 | -1.13 | -1.88 | -1.66 | -1.08 | 8.22 | -1.69 | -1.36 |
| | (1.17) | (1.41) | (1.19) | (1.57) | (11.22) | (1.48) | (1.92) |
| Cash 500 | 1.87 | 0.35 | 1.43 | 1.66 | 8.90 | 1.40 | -0.01 |
| | (1.37) | (1.64) | (1.46) | (1.71) | (7.54) | (1.61) | (1.85) |
| Cash 750 | 1.31 | -0.59 | 0.90 | 0.98 | -12.52 | 1.29 | 1.99 |
| | (1.11) | (1.59) | (1.20) | (1.29) | (8.70) | (1.44) | (1.78) |
| | | | | | | | |
| Control mean | 26.91 | 25.42 | 27.72 | 27.92 | 24.00 | 28.04 | 25.40 |
| Control SD | 21.46 | 20.74 | 21.74 | 21.71 | 17.57 | 21.56 | 20.36 |
| *p*-value (all three equal) | 0.092 | 0.461 | 0.089 | 0.349 | 0.085 | 0.135 | 0.316 |
| Observations | 2,595 | 1,309 | 2,269 | 1,705 | 40 | 1,627 | 827 |

**Panel B. Malawi**
*Pooled cash treatment:*

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Cash | 0.45 | 0.48 | 0.44 | 0.98* | 2.08 | -0.03 | 2.18*** |
| | (0.47) | (0.54) | (0.48) | (0.52) | (1.53) | (0.55) | (0.74) |
| *Individual treatments by cash amount:* | | | | | | | |
| Cash 250 | 0.40 | 0.78 | 0.43 | 0.85 | 4.32 | -0.06 | 1.65* |
| | (0.60) | (0.77) | (0.61) | (0.67) | (2.55) | (0.74) | (0.95) |
| Cash 500 | -0.09 | -0.18 | -0.11 | 0.62 | -0.55 | -0.46 | 2.37* |
| | (0.65) | (0.73) | (0.66) | (0.78) | (2.86) | (0.70) | (1.22) |
| Cash 750 | 1.04 | 0.82 | 1.04 | 1.46* | -1.34 | 0.44 | 2.58** |
| | (0.75) | (0.77) | (0.76) | (0.78) | (5.15) | (0.86) | (1.26) |
| | | | | | | | |
| Control mean | 9.56 | 8.27 | 9.56 | 9.67 | 6.92 | 10.01 | 9.15 |
| Control SD | 10.81 | 9.67 | 10.78 | 10.72 | 7.50 | 11.17 | 9.88 |
| *p*-value (all three equal) | 0.429 | 0.430 | 0.421 | 0.669 | 0.271 | 0.640 | 0.780 |
| Observations | 2,784 | 1,429 | 2,753 | 2,209 | 15 | 2,129 | 918 |

**Panel C. Pooled**
*Pooled cash treatment:*

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Cash | 0.56 | -0.07 | 0.36 | 0.79 | 1.64 | 0.16 | 1.26* |
| | (0.49) | (0.61) | (0.50) | (0.56) | (5.32) | (0.58) | (0.75) |
| *Individual treatments by cash amount* | | | | | | | |
| Cash 250 | -0.32 | -0.50 | -0.49 | 0.02 | 5.90 | -0.73 | 0.26 |
| | (0.65) | (0.80) | (0.63) | (0.79) | (7.53) | (0.76) | (1.04) |
| Cash 500 | 0.85 | 0.10 | 0.58 | 1.10 | 5.96 | 0.35 | 1.24 |
| | (0.75) | (0.91) | (0.75) | (0.88) | (5.71) | (0.81) | (1.10) |
| Cash 750 | 1.17* | 0.21 | 0.98 | 1.25* | -11.29 | 0.81 | 2.37** |
| | (0.66) | (0.83) | (0.68) | (0.71) | (7.81) | (0.79) | (1.08) |
| | | | | | | | |
| Control mean | 17.98 | 16.32 | 17.83 | 17.65 | 20.95 | 17.86 | 16.78 |
| Control SD | 18.94 | 18.02 | 18.98 | 18.77 | 17.44 | 18.78 | 17.66 |
| *p*-value (all three equal) | 0.134 | 0.738 | 0.155 | 0.364 | 0.084 | 0.223 | 0.279 |
| Observations | 5,379 | 2,738 | 5,022 | 3,914 | 55 | 3,756 | 1,745 |

Note: Regressions include baseline measurement, strata fixed effects, and indicator for market access treatment. Standard errors clustered at the village level in parentheses. ***, **, and * represent significance at 1%, 5%, and 10%, respectively.

Table G4: Effects on Non-agricultural Income (Endline Survey), by subgroup

| | (1) | (2) | (3) | (4) | (5) | (6) | (7) |
|---|---|---|---|---|---|---|---|
| | | For subgroups defined at baseline: | | | | | |
| | Entire sample | food insecure | engaged in farming | has any young women | engaged in charcoal production | has any school-aged children | youth-headed |
| **Panel A. Liberia** | | | | | | | |
| *Pooled cash treatment:* | | | | | | | |
| Cash | 4.90** | 3.78** | 3.36 | 7.69*** | 54.79 | 3.60 | 10.79** |
| | (2.23) | (1.82) | (2.19) | (2.93) | (71.82) | (2.35) | (4.47) |
| *Individual treatments by cash amount:* | | | | | | | |
| Cash 250 | 6.89* | 7.18** | 7.26* | 10.69** | 234.87 | 3.50 | 11.25* |
| | (3.77) | (3.52) | (4.28) | (5.25) | (183.78) | (4.36) | (5.75) |
| Cash 500 | 7.02* | 2.25 | 2.28 | 9.51* | 30.76 | 4.84 | 13.60 |
| | (3.99) | (2.10) | (2.87) | (5.24) | (59.67) | (3.19) | (8.82) |
| Cash 750 | 0.79 | 1.60 | 0.75 | 2.77 | -32.10 | 2.44 | 7.32 |
| | (2.42) | (2.72) | (2.80) | (3.24) | (62.07) | (3.13) | (5.21) |
| | | | | | | | |
| Control mean | 12.95 | 9.09 | 13.04 | 13.54 | 28.90 | 13.30 | 13.16 |
| Control SD | 41.88 | 21.18 | 43.76 | 37.02 | 38.82 | 37.80 | 35.10 |
| *p*-value (all three equal) | 0.171 | 0.373 | 0.401 | 0.279 | 0.400 | 0.832 | 0.729 |
| Observations | 2,595 | 1,309 | 2,269 | 1,705 | 40 | 1,627 | 827 |
| | | | | | | | |
| **Panel B. Malawi** | | | | | | | |
| *Pooled cash treatment:* | | | | | | | |
| Cash | 0.48 | -0.84 | 0.70 | -0.05 | -36.52 | -0.65 | 0.08 |
| | (1.19) | (1.21) | (1.19) | (1.41) | (28.93) | (1.37) | (1.97) |
| *Individual treatments by cash amount:* | | | | | | | |
| Cash 250 | 1.94 | 0.03 | 2.19 | 2.28 | 1.48 | 1.61 | 2.73 |
| | (1.62) | (1.81) | (1.64) | (1.94) | (9.72) | (1.99) | (2.79) |
| Cash 500 | -1.33 | -1.36 | -1.06 | -1.87 | -90.69* | -2.01 | -1.38 |
| | (1.31) | (1.31) | (1.32) | (1.61) | (48.34) | (1.65) | (2.16) |
| Cash 750 | 0.84 | -1.21 | 0.98 | -0.58 | 6.40 | -1.51 | -1.38 |
| | (2.07) | (1.74) | (2.09) | (2.32) | (12.78) | (1.87) | (2.59) |
| | | | | | | | |
| Control mean | 11.81 | 10.48 | 11.56 | 13.11 | 62.03 | 12.74 | 13.81 |
| Control SD | 29.86 | 25.73 | 29.30 | 32.33 | 135.18 | 31.98 | 32.20 |
| *p*-value (all three equal) | 0.148 | 0.728 | 0.162 | 0.138 | 0.007 | 0.218 | 0.283 |
| Observations | 2,784 | 1,429 | 2,753 | 2,209 | 15 | 2,129 | 918 |
| | | | | | | | |
| **Panel C. Pooled** | | | | | | | |
| *Pooled cash treatment:* | | | | | | | |
| Cash | 2.66** | 1.49 | 1.95 | 3.35** | 28.94 | 1.21 | 5.13** |
| | (1.25) | (1.08) | (1.19) | (1.52) | (56.82) | (1.30) | (2.35) |
| *Individual treatments by cash amount* | | | | | | | |
| Cash 250 | 4.40** | 3.64* | 4.52** | 6.00** | 134.64 | 2.46 | 6.74** |
| | (2.03) | (1.95) | (2.14) | (2.56) | (111.64) | (2.18) | (3.03) |
| Cash 500 | 2.75 | 0.40 | 0.58 | 3.24 | -2.88 | 0.98 | 5.78 |
| | (2.06) | (1.26) | (1.48) | (2.55) | (53.82) | (1.73) | (4.43) |
| Cash 750 | 0.78 | 0.33 | 0.77 | 0.84 | -32.91 | 0.24 | 2.69 |
| | (1.58) | (1.60) | (1.70) | (1.90) | (57.04) | (1.73) | (2.83) |
| | | | | | | | |
| Control mean | 12.36 | 9.83 | 12.23 | 13.30 | 34.82 | 12.98 | 13.50 |
| Control SD | 36.20 | 23.71 | 36.61 | 34.45 | 64.05 | 34.63 | 33.57 |
| *p*-value (all three equal) | 0.299 | 0.271 | 0.235 | 0.227 | 0.358 | 0.674 | 0.523 |
| Observations | 5,379 | 2,738 | 5,022 | 3,914 | 55 | 3,756 | 1,745 |

Note: Regressions include baseline measurement, strata fixed effects, and indicator for market access treatment. Standard errors clustered at the village level in parentheses. ***, **, and * represent significance at 1%, 5%, and 10%, respectively.

Table G5: Effects on Non-land Wealth (Endline Survey), by subgroup

| | (1) | (2) | (3) | (4) | (5) | (6) | (7) |
|---|---|---|---|---|---|---|---|
| | Entire sample | For subgroups defined at baseline: | | | | | |
| | | food insecure | engaged in farming | has any young women | engaged in charcoal production | has any school-aged children | youth-headed |
| **Panel A. Liberia** | | | | | | | |
| *Pooled cash treatment:* | | | | | | | |
| Cash | 94.75*** | 82.15*** | 112.13*** | 130.60*** | -256.52 | 99.39** | 60.80 |
| | (30.29) | (28.58) | (34.57) | (38.49) | (164.35) | (39.63) | (44.67) |
| *Individual treatments by cash amount:* | | | | | | | |
| Cash 250 | 78.94* | 74.91* | 93.54* | 118.01** | -339.29 | 36.07 | 35.02 |
| | (41.17) | (43.02) | (47.89) | (58.02) | (390.92) | (54.46) | (65.60) |
| Cash 500 | 120.05** | 85.35** | 143.02*** | 121.89** | -67.10 | 149.41*** | 45.43 |
| | (47.49) | (36.13) | (53.73) | (53.32) | (139.30) | (56.21) | (56.48) |
| Cash 750 | 85.14** | 86.89* | 99.54** | 152.40*** | -426.55* | 106.41** | 103.61 |
| | (39.64) | (47.05) | (45.24) | (55.11) | (241.45) | (49.85) | (63.06) |
| | | | | | | | |
| Control mean | 322.14 | 199.07 | 352.49 | 306.76 | 279.29 | 375.76 | 231.13 |
| Control SD | 772.53 | 550.46 | 816.99 | 740.43 | 639.76 | 866.87 | 602.70 |
| *p*-value (all three equal) | 0.739 | 0.972 | 0.707 | 0.855 | 0.401 | 0.217 | 0.610 |
| Observations | 2,595 | 1,309 | 2,269 | 1,705 | 40 | 1,627 | 827 |
| | | | | | | | |
| **Panel B. Malawi** | | | | | | | |
| *Pooled cash treatment:* | | | | | | | |
| Cash | 30.91*** | 29.94*** | 30.78*** | 32.60*** | 93.22** | 24.69*** | 29.81*** |
| | (7.74) | (7.72) | (7.84) | (8.82) | (39.04) | (9.31) | (11.29) |
| *Individual treatments by cash amount:* | | | | | | | |
| Cash 250 | 5.60 | 9.47 | 5.25 | 11.28 | 30.19 | 0.03 | 15.40 |
| | (9.57) | (11.87) | (9.62) | (11.13) | (58.88) | (12.16) | (14.01) |
| Cash 500 | 30.08*** | 35.05*** | 29.59*** | 28.53*** | 155.67*** | 30.36*** | 36.10** |
| | (9.42) | (10.24) | (9.52) | (10.66) | (46.73) | (11.71) | (17.01) |
| Cash 750 | 58.08*** | 45.44*** | 58.75*** | 57.43*** | -19.70 | 43.61*** | 39.53** |
| | (12.97) | (11.90) | (13.18) | (14.51) | (70.64) | (14.80) | (19.77) |
| | | | | | | | |
| Control mean | 125.32 | 84.02 | 125.91 | 123.30 | 18.72 | 138.99 | 91.29 |
| Control SD | 218.11 | 142.50 | 217.85 | 216.17 | 40.38 | 229.10 | 176.69 |
| *p*-value (all three equal) | 0.001 | 0.056 | 0.001 | 0.017 | 0.134 | 0.020 | 0.416 |
| Observations | 2,784 | 1,429 | 2,753 | 2,209 | 15 | 2,129 | 918 |
| | | | | | | | |
| **Panel C. Pooled** | | | | | | | |
| *Pooled cash treatment:* | | | | | | | |
| Cash | 61.65*** | 55.44*** | 67.44*** | 75.60*** | -160.71 | 56.85*** | 44.79** |
| | (15.34) | (14.36) | (16.40) | (17.67) | (129.77) | (18.39) | (22.06) |
| *Individual treatments by cash amount* | | | | | | | |
| Cash 250 | 40.55* | 43.77** | 44.25** | 57.80** | -245.77 | 16.14 | 27.23 |
| | (20.65) | (22.10) | (22.13) | (26.05) | (276.40) | (24.26) | (31.36) |
| Cash 500 | 73.49*** | 57.83*** | 80.84*** | 70.57*** | 31.33 | 81.92*** | 39.96 |
| | (23.52) | (19.03) | (24.96) | (24.61) | (106.35) | (25.92) | (29.02) |
| Cash 750 | 71.08*** | 65.56*** | 77.04*** | 98.23*** | -395.30* | 70.30*** | 68.96** |
| | (20.39) | (22.25) | (22.05) | (25.23) | (227.51) | (23.76) | (32.19) |
| | | | | | | | |
| Control mean | 220.86 | 138.04 | 229.17 | 203.48 | 232.76 | 242.06 | 156.95 |
| Control SD | 568.98 | 395.24 | 585.31 | 523.49 | 586.57 | 608.53 | 437.90 |
| *p*-value (all three equal) | 0.366 | 0.735 | 0.355 | 0.407 | 0.179 | 0.050 | 0.531 |
| Observations | 5,379 | 2,738 | 5,022 | 3,914 | 55 | 3,756 | 1,745 |

Note: Regressions include baseline measurement, strata fixed effects, and indicator for market access treatment. Standard errors clustered at the village level in parentheses. ***, **, and * represent significance at 1%, 5%, and 10%, respectively.

## Table G6: Effects on Intimate Partner Violence (Endline Survey), by subgroup

| | (1) | (2) | (3) | (4) | (5) | (6) | (7) |
|---|---|---|---|---|---|---|---|
| | | | | For subgroups defined at baseline: | | | |
| | Entire sample | food insecure | engaged in farming | has any young women | engaged in charcoal production | has any school-aged children | youth-headed |
| **Panel A. Liberia** | | | | | | | |
| *Pooled cash treatment:* | | | | | | | |
| Cash | -0.08*** | -0.08** | -0.09*** | -0.11*** | -0.04 | -0.08** | -0.13** |
| | (0.03) | (0.04) | (0.03) | (0.04) | (0.26) | (0.03) | (0.06) |
| *Individual treatments by cash amount:* | | | | | | | |
| Cash 250 | -0.05 | -0.05 | -0.09** | -0.08 | -0.50 | -0.08 | -0.11 |
| | (0.04) | (0.05) | (0.04) | (0.05) | (0.51) | (0.05) | (0.07) |
| Cash 500 | -0.10*** | -0.08 | -0.11*** | -0.13*** | 0.60 | -0.10** | -0.07 |
| | (0.04) | (0.05) | (0.04) | (0.05) | (0.56) | (0.05) | (0.07) |
| Cash 750 | -0.08** | -0.13*** | -0.08* | -0.13*** | -0.50 | -0.07 | -0.24*** |
| | (0.04) | (0.05) | (0.04) | (0.05) | (0.51) | (0.05) | (0.07) |
| | | | | | | | |
| Control mean | 0.38 | 0.40 | 0.38 | 0.44 | 0.52 | 0.36 | 0.55 |
| Control SD | 0.49 | 0.49 | 0.49 | 0.50 | 0.51 | 0.48 | 0.50 |
| *p*-value (all three equal) | 0.560 | 0.392 | 0.838 | 0.656 | 0.496 | 0.836 | 0.115 |
| Observations | 1,229 | 651 | 1,060 | 819 | 20 | 806 | 368 |
| | | | | | | | |
| **Panel B. Malawi** | | | | | | | |
| *Pooled cash treatment:* | | | | | | | |
| Cash | 0.01 | -0.00 | 0.01 | 0.01 | 0.18 | 0.00 | 0.03 |
| | (0.01) | (0.02) | (0.01) | (0.02) | (0.33) | (0.02) | (0.03) |
| *Individual treatments by cash amount:* | | | | | | | |
| Cash 250 | 0.01 | -0.00 | 0.01 | 0.01 | 0.00 | 0.01 | 0.04 |
| | (0.02) | (0.03) | (0.02) | (0.02) | (0.00) | (0.02) | (0.04) |
| Cash 500 | 0.01 | 0.03 | 0.01 | 0.03 | 0.50 | 0.00 | 0.01 |
| | (0.02) | (0.03) | (0.02) | (0.02) | (0.83) | (0.02) | (0.04) |
| Cash 750 | -0.01 | -0.04* | -0.01 | -0.01 | 0.00 | -0.00 | 0.04 |
| | (0.02) | (0.02) | (0.02) | (0.02) | (0.00) | (0.02) | (0.05) |
| | | | | | | | |
| Control mean | 0.18 | 0.20 | 0.18 | 0.20 | 0.00 | 0.18 | 0.26 |
| Control SD | 0.39 | 0.40 | 0.39 | 0.40 | 0.00 | 0.38 | 0.44 |
| *p*-value (all three equal) | 0.599 | 0.082 | 0.619 | 0.503 | 0.563 | 0.897 | 0.826 |
| Observations | 1,829 | 953 | 1,809 | 1,434 | 11 | 1,436 | 535 |
| | | | | | | | |
| **Panel C. Pooled** | | | | | | | |
| *Pooled cash treatment:* | | | | | | | |
| Cash | -0.03** | -0.04** | -0.03** | -0.04** | 0.22 | -0.03* | -0.03 |
| | (0.01) | (0.02) | (0.01) | (0.02) | (0.21) | (0.02) | (0.03) |
| *Individual treatments by cash amount* | | | | | | | |
| Cash 250 | -0.01 | -0.02 | -0.02 | -0.02 | -0.10 | -0.02 | -0.02 |
| | (0.02) | (0.03) | (0.02) | (0.02) | (0.32) | (0.02) | (0.04) |
| Cash 500 | -0.03* | -0.02 | -0.03* | -0.03 | 0.59 | -0.04* | -0.02 |
| | (0.02) | (0.03) | (0.02) | (0.02) | (0.43) | (0.02) | (0.04) |
| Cash 750 | -0.03* | -0.07*** | -0.03* | -0.05** | -0.08 | -0.03 | -0.08* |
| | (0.02) | (0.02) | (0.02) | (0.02) | (0.35) | (0.02) | (0.04) |
| | | | | | | | |
| Control mean | 0.27 | 0.29 | 0.26 | 0.29 | 0.42 | 0.25 | 0.38 |
| Control SD | 0.44 | 0.45 | 0.44 | 0.46 | 0.50 | 0.44 | 0.49 |
| *p*-value (all three equal) | 0.575 | 0.113 | 0.872 | 0.624 | 0.523 | 0.835 | 0.466 |
| Observations | 3,058 | 1,604 | 2,869 | 2,253 | 31 | 2,242 | 903 |

Note: Regressions include baseline measurement, strata fixed effects, and indicator for market access treatment. Standard errors clustered at the village level in parentheses. ***, **, and * represent significance at 1%, 5%, and 10%, respectively.

Table G7: Effects on Psychological Wellbeing (Endline Survey), by subgroup

| | (1) | (2) | (3) | (4) | (5) | (6) | (7) |
|---|---|---|---|---|---|---|---|
| | | For subgroups defined at baseline: | | | | | |
| | Entire sample | food insecure | engaged in farming | has any young women | engaged in charcoal production | has any school-aged children | youth-headed |
| **Panel A. Liberia** | | | | | | | |
| *Pooled cash treatment:* | | | | | | | |
| Cash | 0.34*** | 0.36*** | 0.36*** | 0.37*** | 0.50 | 0.35*** | 0.37*** |
| | (0.04) | (0.06) | (0.04) | (0.05) | (0.39) | (0.05) | (0.07) |
| *Individual treatments by cash amount:* | | | | | | | |
| Cash 250 | 0.28*** | 0.29*** | 0.30*** | 0.36*** | 0.49 | 0.33*** | 0.48*** |
| | (0.06) | (0.08) | (0.06) | (0.07) | (0.67) | (0.07) | (0.10) |
| Cash 500 | 0.36*** | 0.44*** | 0.40*** | 0.38*** | -0.08 | 0.32*** | 0.24** |
| | (0.06) | (0.08) | (0.06) | (0.07) | (0.66) | (0.07) | (0.10) |
| Cash 750 | 0.37*** | 0.34*** | 0.38*** | 0.37*** | 1.24** | 0.39*** | 0.39*** |
| | (0.05) | (0.09) | (0.05) | (0.07) | (0.51) | (0.07) | (0.09) |
| | | | | | | | |
| Control mean | -0.00 | -0.06 | 0.02 | 0.02 | -0.12 | 0.00 | 0.10 |
| Control SD | 1.00 | 1.02 | 0.99 | 1.01 | 1.14 | 1.02 | 0.96 |
| *p*-value (all three equal) | 0.402 | 0.315 | 0.401 | 0.953 | 0.190 | 0.588 | 0.147 |
| Observations | 2,595 | 1,309 | 2,269 | 1,705 | 40 | 1,627 | 827 |
| **Panel B. Malawi** | | | | | | | |
| *Pooled cash treatment:* | | | | | | | |
| Cash | 0.10** | 0.06 | 0.10** | 0.15*** | 0.31 | 0.12** | 0.11* |
| | (0.04) | (0.06) | (0.04) | (0.05) | (0.60) | (0.05) | (0.06) |
| *Individual treatments by cash amount:* | | | | | | | |
| Cash 250 | 0.04 | -0.09 | 0.04 | 0.11* | -0.49 | 0.08 | 0.06 |
| | (0.06) | (0.08) | (0.06) | (0.06) | (0.76) | (0.06) | (0.08) |
| Cash 500 | 0.11* | 0.17** | 0.10 | 0.13** | 1.19 | 0.08 | 0.20** |
| | (0.06) | (0.08) | (0.06) | (0.06) | (0.73) | (0.07) | (0.09) |
| Cash 750 | 0.16** | 0.10 | 0.16*** | 0.19*** | 0.68 | 0.19*** | 0.08 |
| | (0.06) | (0.08) | (0.06) | (0.06) | (0.98) | (0.06) | (0.10) |
| | | | | | | | |
| Control mean | 0.00 | -0.12 | 0.00 | -0.01 | 0.44 | -0.04 | 0.07 |
| Control SD | 1.00 | 1.00 | 1.00 | 1.02 | 0.58 | 1.00 | 0.98 |
| *p*-value (all three equal) | 0.277 | 0.022 | 0.264 | 0.544 | 0.057 | 0.307 | 0.331 |
| Observations | 2,784 | 1,429 | 2,753 | 2,209 | 15 | 2,129 | 918 |
| **Panel C. Pooled** | | | | | | | |
| *Pooled cash treatment:* | | | | | | | |
| Cash | 0.21*** | 0.20*** | 0.22*** | 0.24*** | 0.44 | 0.22*** | 0.24*** |
| | (0.03) | (0.04) | (0.03) | (0.03) | (0.32) | (0.04) | (0.05) |
| *Individual treatments by cash amount* | | | | | | | |
| Cash 250 | 0.16*** | 0.09 | 0.16*** | 0.22*** | 0.18 | 0.19*** | 0.26*** |
| | (0.04) | (0.06) | (0.04) | (0.05) | (0.51) | (0.05) | (0.07) |
| Cash 500 | 0.23*** | 0.31*** | 0.23*** | 0.24*** | 0.21 | 0.19*** | 0.22*** |
| | (0.04) | (0.06) | (0.04) | (0.05) | (0.57) | (0.05) | (0.07) |
| Cash 750 | 0.26*** | 0.21*** | 0.26*** | 0.27*** | 1.17** | 0.28*** | 0.23*** |
| | (0.04) | (0.06) | (0.04) | (0.05) | (0.49) | (0.05) | (0.06) |
| | | | | | | | |
| Control mean | 0.00 | -0.09 | 0.01 | 0.00 | -0.02 | -0.02 | 0.08 |
| Control SD | 1.00 | 1.01 | 1.00 | 1.02 | 1.08 | 1.01 | 0.97 |
| *p*-value (all three equal) | 0.117 | 0.014 | 0.128 | 0.644 | 0.091 | 0.177 | 0.898 |
| Observations | 5,379 | 2,738 | 5,022 | 3,914 | 55 | 3,756 | 1,745 |

Note: Regressions include baseline measurement, strata fixed effects, and indicator for market access treatment. Standard errors clustered at the village level in parentheses. ***, **, and * represent significance at 1%, 5%, and 10%, respectively.

Table G8: Effects on Sent Interpersonal Transfers (Endline Survey), by subgroup

| | (1) | (2) | (3) | (4) | (5) | (6) | (7) |
|---|---|---|---|---|---|---|---|
| | | | | For subgroups defined at baseline: | | | |
| | Entire sample | food insecure | engaged in farming | has any young women | engaged in charcoal production | has any school-aged children | youth-headed |
| **Panel A. Liberia** | | | | | | | |
| *Pooled cash treatment:* | | | | | | | |
| Cash | -0.03 | 0.70 | -0.29 | -1.38** | 0.88 | -1.36* | 0.29 |
| | (0.55) | (0.54) | (0.60) | (0.67) | (3.56) | (0.71) | (1.10) |
| *Individual treatments by cash amount:* | | | | | | | |
| Cash 250 | -0.18 | 0.28 | -0.78 | -1.78** | 5.62 | -1.68* | -1.22 |
| | (0.75) | (0.74) | (0.84) | (0.82) | (10.67) | (0.96) | (1.35) |
| Cash 500 | -0.18 | 1.22 | -0.37 | -0.75 | 1.62 | -0.88 | 0.94 |
| | (0.72) | (0.82) | (0.75) | (0.89) | (3.77) | (0.93) | (1.57) |
| Cash 750 | 0.26 | 0.53 | 0.26 | -1.64* | -2.91 | -1.54* | 1.16 |
| | (0.77) | (0.81) | (0.83) | (0.88) | (4.14) | (0.87) | (1.52) |
| | | | | | | | |
| Control mean | 4.18 | 2.56 | 4.40 | 4.85 | 2.07 | 4.59 | 4.83 |
| Control SD | 15.13 | 9.10 | 15.83 | 17.26 | 5.74 | 16.92 | 19.14 |
| *p*-value (all three equal) | 0.848 | 0.629 | 0.554 | 0.527 | 0.443 | 0.724 | 0.259 |
| Observations | 2,595 | 1,309 | 2,269 | 1,705 | 40 | 1,627 | 827 |
| | | | | | | | |
| **Panel B. Malawi** | | | | | | | |
| *Pooled cash treatment:* | | | | | | | |
| Cash | 0.18 | 0.04 | 0.18 | 0.14 | -0.67 | 0.23 | 0.21 |
| | (0.15) | (0.19) | (0.15) | (0.16) | (0.71) | (0.17) | (0.23) |
| *Individual treatments by cash amount:* | | | | | | | |
| Cash 250 | 0.23 | 0.22 | 0.23 | 0.14 | -1.20 | 0.35 | 0.45 |
| | (0.24) | (0.38) | (0.24) | (0.23) | (1.24) | (0.29) | (0.36) |
| Cash 500 | 0.05 | -0.03 | 0.05 | 0.01 | -0.28 | 0.16 | -0.08 |
| | (0.19) | (0.22) | (0.19) | (0.24) | (0.42) | (0.23) | (0.25) |
| Cash 750 | 0.27 | -0.08 | 0.26 | 0.28 | -3.48** | 0.18 | 0.26 |
| | (0.22) | (0.19) | (0.22) | (0.24) | (1.41) | (0.22) | (0.37) |
| | | | | | | | |
| Control mean | 1.07 | 0.83 | 1.07 | 1.11 | 0.51 | 1.02 | 0.97 |
| Control SD | 3.29 | 2.80 | 3.31 | 3.40 | 1.13 | 3.09 | 3.02 |
| *p*-value (all three equal) | 0.654 | 0.735 | 0.665 | 0.682 | 0.017 | 0.841 | 0.311 |
| Observations | 2,784 | 1,429 | 2,753 | 2,209 | 15 | 2,129 | 918 |
| | | | | | | | |
| **Panel C. Pooled** | | | | | | | |
| *Pooled cash treatment:* | | | | | | | |
| Cash | 0.08 | 0.35 | -0.04 | -0.52* | 0.25 | -0.46 | 0.25 |
| | (0.28) | (0.28) | (0.28) | (0.31) | (2.81) | (0.32) | (0.54) |
| *Individual treatments by cash amount* | | | | | | | |
| Cash 250 | 0.04 | 0.25 | -0.21 | -0.67* | 4.45 | -0.52 | -0.31 |
| | (0.38) | (0.41) | (0.40) | (0.39) | (5.87) | (0.44) | (0.67) |
| Cash 500 | -0.08 | 0.60 | -0.17 | -0.36 | -0.67 | -0.30 | 0.39 |
| | (0.36) | (0.43) | (0.35) | (0.42) | (3.31) | (0.42) | (0.76) |
| Cash 750 | 0.27 | 0.20 | 0.26 | -0.54 | -2.86 | -0.58 | 0.70 |
| | (0.39) | (0.38) | (0.40) | (0.41) | (3.63) | (0.41) | (0.77) |
| | | | | | | | |
| Control mean | 2.58 | 1.64 | 2.59 | 2.75 | 1.79 | 2.58 | 2.78 |
| Control SD | 10.91 | 6.62 | 11.08 | 11.84 | 5.24 | 11.53 | 13.43 |
| *p*-value (all three equal) | 0.734 | 0.722 | 0.525 | 0.790 | 0.441 | 0.823 | 0.432 |
| Observations | 5,379 | 2,738 | 5,022 | 3,914 | 55 | 3,756 | 1,745 |

Note: Regressions include baseline measurement, strata fixed effects, and indicator for market access treatment. Standard errors clustered at the village level in parentheses. ***, **, and * represent significance at 1%, 5%, and 10%, respectively.

Table G9: Effects on Received Interpersonal Transfers (Endline Survey), by subgroup

| | (1) | (2) | (3) | (4) | (5) | (6) | (7) |
|---|---|---|---|---|---|---|---|
| | | | | For subgroups defined at baseline: | | | |
| | Entire sample | food insecure | engaged in farming | has any young women | engaged in charcoal production | has any school-aged children | youth-headed |
| **Panel A. Liberia** | | | | | | | |
| *Pooled cash treatment:* | | | | | | | |
| Cash | 1.63** | 2.33*** | 0.84 | 1.22 | 2.99 | 1.62* | 3.06** |
| | (0.72) | (0.83) | (0.75) | (0.92) | (7.49) | (0.93) | (1.24) |
| *Individual treatments by cash amount:* | | | | | | | |
| Cash 250 | 1.49 | 2.67** | 1.22 | 0.97 | 29.15* | 0.48 | 4.27*** |
| | (0.97) | (1.11) | (1.05) | (1.11) | (16.04) | (1.21) | (1.63) |
| Cash 500 | 0.54 | 1.05 | -1.09 | -0.31 | -2.42 | 0.65 | 1.76 |
| | (0.97) | (1.06) | (0.81) | (1.25) | (5.62) | (1.26) | (1.91) |
| Cash 750 | 2.86*** | 3.51** | 2.37** | 3.10** | -9.86 | 3.63*** | 3.20 |
| | (1.04) | (1.63) | (1.11) | (1.44) | (5.97) | (1.27) | (2.14) |
| | | | | | | | |
| Control mean | 8.41 | 6.40 | 8.84 | 9.84 | 9.14 | 8.85 | 9.18 |
| Control SD | 19.11 | 12.70 | 19.86 | 19.67 | 12.95 | 21.52 | 14.93 |
| *p*-value (all three equal) | 0.163 | 0.304 | 0.004 | 0.121 | 0.073 | 0.057 | 0.556 |
| Observations | 2,595 | 1,309 | 2,269 | 1,705 | 40 | 1,627 | 827 |
| | | | | | | | |
| **Panel B. Malawi** | | | | | | | |
| *Pooled cash treatment:* | | | | | | | |
| Cash | 0.11 | 0.14 | 0.11 | 0.09 | 1.50 | -0.01 | -0.02 |
| | (0.56) | (0.61) | (0.56) | (0.64) | (3.70) | (0.60) | (0.98) |
| *Individual treatments by cash amount:* | | | | | | | |
| Cash 250 | 0.18 | 0.70 | 0.22 | 0.06 | -5.20 | 0.24 | -0.47 |
| | (0.76) | (1.02) | (0.76) | (0.84) | (8.43) | (0.91) | (1.22) |
| Cash 500 | -0.18 | -0.45 | -0.24 | -0.10 | 6.59 | -0.09 | 0.07 |
| | (0.75) | (0.77) | (0.76) | (0.82) | (5.05) | (0.87) | (1.35) |
| Cash 750 | 0.34 | 0.15 | 0.35 | 0.32 | -0.25 | -0.19 | 0.40 |
| | (0.91) | (0.92) | (0.91) | (1.07) | (14.39) | (0.78) | (1.64) |
| | | | | | | | |
| Control mean | 7.02 | 5.34 | 7.01 | 7.58 | 4.10 | 7.09 | 8.50 |
| Control SD | 13.13 | 10.24 | 13.16 | 13.97 | 8.34 | 13.36 | 14.40 |
| *p*-value (all three equal) | 0.870 | 0.608 | 0.825 | 0.940 | 0.447 | 0.913 | 0.872 |
| Observations | 2,784 | 1,429 | 2,753 | 2,209 | 15 | 2,129 | 918 |
| | | | | | | | |
| **Panel C. Pooled** | | | | | | | |
| *Pooled cash treatment:* | | | | | | | |
| Cash | 0.88* | 1.21** | 0.48 | 0.63 | 2.71 | 0.69 | 1.51* |
| | (0.45) | (0.51) | (0.46) | (0.55) | (5.82) | (0.54) | (0.79) |
| *Individual treatments by cash amount* | | | | | | | |
| Cash 250 | 0.90 | 1.61** | 0.76 | 0.63 | 14.93 | 0.38 | 1.81* |
| | (0.62) | (0.76) | (0.64) | (0.69) | (10.74) | (0.74) | (1.04) |
| Cash 500 | 0.16 | 0.34 | -0.63 | -0.25 | 1.23 | 0.16 | 0.91 |
| | (0.61) | (0.66) | (0.57) | (0.72) | (5.10) | (0.74) | (1.15) |
| Cash 750 | 1.61** | 1.71* | 1.33* | 1.52* | -9.64 | 1.52** | 1.83 |
| | (0.70) | (0.90) | (0.72) | (0.88) | (6.16) | (0.74) | (1.35) |
| | | | | | | | |
| Control mean | 7.69 | 5.84 | 7.84 | 8.57 | 8.24 | 7.86 | 8.82 |
| Control SD | 16.32 | 11.47 | 16.57 | 16.74 | 12.28 | 17.41 | 14.65 |
| *p*-value (all three equal) | 0.194 | 0.253 | 0.025 | 0.199 | 0.137 | 0.258 | 0.782 |
| Observations | 5,379 | 2,738 | 5,022 | 3,914 | 55 | 3,756 | 1,745 |

Note: Regressions include baseline measurement, strata fixed effects, and indicator for market access treatment. Standard errors clustered at the village level in parentheses. ***, **, and * represent significance at 1%, 5%, and 10%, respectively.

Table G10: Effects on Household Resilience (Endline Survey), by subgroup

| | (1) | (2) | (3) | (4) | (5) | (6) | (7) |
|---|---|---|---|---|---|---|---|
| | | | | For subgroups defined at baseline: | | | |
| | Entire sample | food insecure | engaged in farming | has any young women | engaged in charcoal production | has any school-aged children | youth-headed |
| **Panel A. Liberia** | | | | | | | |
| *Pooled cash treatment:* | | | | | | | |
| Cash | 0.09** | 0.07 | 0.08* | 0.14*** | -0.07 | 0.08 | 0.18*** |
| | (0.04) | (0.05) | (0.04) | (0.04) | (0.23) | (0.05) | (0.06) |
| *Individual treatments by cash amount:* | | | | | | | |
| Cash 250 | 0.14*** | 0.09 | 0.12** | 0.19*** | 0.00 | 0.18*** | 0.21** |
| | (0.05) | (0.06) | (0.06) | (0.06) | (0.35) | (0.07) | (0.08) |
| Cash 500 | 0.07 | 0.08 | 0.08 | 0.10 | -0.15 | 0.07 | 0.13 |
| | (0.05) | (0.07) | (0.06) | (0.06) | (0.39) | (0.06) | (0.10) |
| Cash 750 | 0.06 | 0.04 | 0.04 | 0.11* | -0.03 | -0.00 | 0.20** |
| | (0.06) | (0.07) | (0.06) | (0.06) | (0.48) | (0.08) | (0.09) |
| | | | | | | | |
| Control mean | 0.00 | 0.02 | 0.01 | 0.00 | 0.17 | 0.01 | 0.02 |
| Control SD | 1.00 | 0.94 | 1.00 | 0.98 | 0.74 | 1.00 | 1.00 |
| *p*-value (all three equal) | 0.403 | 0.851 | 0.574 | 0.427 | 0.960 | 0.092 | 0.746 |
| Observations | 2,595 | 1,309 | 2,269 | 1,705 | 40 | 1,627 | 827 |
| | | | | | | | |
| **Panel B. Malawi** | | | | | | | |
| *Pooled cash treatment:* | | | | | | | |
| Cash | 0.12*** | 0.06 | 0.12*** | 0.13*** | -0.44 | 0.12** | 0.13* |
| | (0.04) | (0.06) | (0.04) | (0.04) | (0.50) | (0.05) | (0.07) |
| *Individual treatments by cash amount:* | | | | | | | |
| Cash 250 | 0.10* | -0.01 | 0.10* | 0.12* | -0.74 | 0.10 | 0.10 |
| | (0.06) | (0.08) | (0.06) | (0.06) | (0.99) | (0.07) | (0.09) |
| Cash 500 | 0.11** | 0.10 | 0.10** | 0.15*** | -0.16 | 0.09 | 0.16* |
| | (0.05) | (0.07) | (0.05) | (0.06) | (0.99) | (0.06) | (0.09) |
| Cash 750 | 0.15*** | 0.10 | 0.16*** | 0.13*** | 0.81 | 0.16*** | 0.13 |
| | (0.04) | (0.07) | (0.05) | (0.05) | (1.32) | (0.06) | (0.09) |
| | | | | | | | |
| Control mean | 0.00 | -0.01 | 0.00 | -0.00 | 0.09 | -0.02 | 0.03 |
| Control SD | 1.00 | 1.03 | 1.00 | 1.02 | 0.80 | 1.02 | 1.02 |
| *p*-value (all three equal) | 0.674 | 0.410 | 0.510 | 0.890 | 0.210 | 0.475 | 0.879 |
| Observations | 2,784 | 1,429 | 2,753 | 2,209 | 15 | 2,129 | 918 |
| | | | | | | | |
| **Panel C. Pooled** | | | | | | | |
| *Pooled cash treatment:* | | | | | | | |
| Cash | 0.11*** | 0.07* | 0.10*** | 0.14*** | -0.10 | 0.10*** | 0.15*** |
| | (0.03) | (0.04) | (0.03) | (0.03) | (0.21) | (0.03) | (0.05) |
| *Individual treatments by cash amount* | | | | | | | |
| Cash 250 | 0.12*** | 0.04 | 0.11*** | 0.15*** | -0.42 | 0.13*** | 0.15** |
| | (0.04) | (0.05) | (0.04) | (0.05) | (0.36) | (0.05) | (0.06) |
| Cash 500 | 0.09** | 0.09* | 0.09** | 0.13*** | 0.08 | 0.08* | 0.15** |
| | (0.04) | (0.05) | (0.04) | (0.04) | (0.34) | (0.04) | (0.07) |
| Cash 750 | 0.10*** | 0.07 | 0.11*** | 0.12*** | -0.03 | 0.09* | 0.17*** |
| | (0.04) | (0.05) | (0.04) | (0.04) | (0.50) | (0.05) | (0.06) |
| | | | | | | | |
| Control mean | 0.00 | 0.01 | 0.00 | -0.00 | 0.15 | -0.00 | 0.02 |
| Control SD | 1.00 | 0.99 | 1.00 | 1.01 | 0.74 | 1.01 | 1.01 |
| *p*-value (all three equal) | 0.848 | 0.686 | 0.946 | 0.859 | 0.500 | 0.582 | 0.963 |
| Observations | 5,379 | 2,738 | 5,022 | 3,914 | 55 | 3,756 | 1,745 |

Note: Regressions include baseline measurement, strata fixed effects, and indicator for market access treatment. Standard errors clustered at the village level in parentheses. ***, **, and * represent significance at 1%, 5%, and 10%, respectively.

## Table G11: Effects on Agricultural Input Purchases (Endline Survey), by subgroup

| | (1) | (2) | (3) | (4) | (5) | (6) | (7) |
|---|---|---|---|---|---|---|---|
| | | | | For subgroups defined at baseline: | | | |
| | Entire sample | food insecure | engaged in farming | has any young women | engaged in charcoal production | has any school-aged children | youth-headed |
| **Panel A. Liberia** | | | | | | | |
| *Pooled cash treatment:* | | | | | | | |
| Cash | -0.17 | -1.12 | -0.04 | 0.24 | -29.90* | 0.29 | -2.21 |
| | (1.21) | (1.05) | (0.99) | (1.22) | (14.95) | (1.38) | (1.53) |
| *Individual treatments by cash amount:* | | | | | | | |
| Cash 250 | -2.66** | -2.82** | -2.57** | -2.70* | -32.13 | -2.51 | -4.74*** |
| | (1.29) | (1.13) | (1.05) | (1.39) | (29.72) | (1.57) | (1.69) |
| Cash 500 | 0.60 | 0.41 | 1.64 | 0.96 | -17.08 | 1.23 | -2.43 |
| | (1.41) | (1.24) | (1.38) | (1.48) | (13.89) | (1.72) | (1.72) |
| Cash 750 | 1.54 | -0.99 | 0.70 | 2.42 | -45.62* | 1.88 | 0.61 |
| | (1.93) | (1.49) | (1.33) | (1.95) | (26.71) | (2.22) | (2.33) |
| | | | | | | | |
| Control mean | 4.81 | 4.55 | 4.30 | 4.52 | 26.20 | 4.86 | 6.30 |
| Control SD | 21.67 | 20.61 | 19.16 | 20.64 | 65.83 | 20.45 | 26.26 |
| *p*-value (all three equal) | 0.007 | 0.006 | 0.002 | 0.005 | 0.232 | 0.029 | 0.053 |
| Observations | 2,595 | 1,309 | 2,269 | 1,705 | 40 | 1,627 | 827 |
| | | | | | | | |
| **Panel B. Malawi** | | | | | | | |
| *Pooled cash treatment:* | | | | | | | |
| Cash | 2.73*** | 2.22*** | 2.83*** | 3.10*** | 12.89 | 3.00*** | 3.08*** |
| | (0.71) | (0.85) | (0.71) | (0.76) | (11.43) | (0.80) | (0.97) |
| *Individual treatments by cash amount:* | | | | | | | |
| Cash 250 | 1.74* | 1.23 | 1.83* | 1.92* | 10.63 | 2.40** | 2.56* |
| | (0.97) | (1.13) | (0.98) | (0.99) | (20.62) | (1.16) | (1.42) |
| Cash 500 | 2.91*** | 2.35** | 3.03*** | 3.34*** | 14.94 | 2.78*** | 3.52** |
| | (0.96) | (1.06) | (0.97) | (1.01) | (13.70) | (1.03) | (1.37) |
| Cash 750 | 3.56*** | 3.08** | 3.66*** | 4.03*** | 7.53 | 3.81*** | 3.20** |
| | (1.11) | (1.40) | (1.12) | (1.23) | (28.33) | (1.27) | (1.47) |
| | | | | | | | |
| Control mean | 16.65 | 14.96 | 16.67 | 16.28 | 16.35 | 17.06 | 14.84 |
| Control SD | 17.65 | 16.18 | 17.66 | 17.54 | 5.74 | 17.81 | 13.45 |
| *p*-value (all three equal) | 0.354 | 0.481 | 0.354 | 0.272 | 0.959 | 0.644 | 0.858 |
| Observations | 2,784 | 1,429 | 2,753 | 2,209 | 15 | 2,129 | 918 |
| | | | | | | | |
| **Panel C. Pooled** | | | | | | | |
| *Pooled cash treatment:* | | | | | | | |
| Cash | 1.31* | 0.61 | 1.52** | 1.84*** | -20.60 | 1.83** | 0.53 |
| | (0.70) | (0.68) | (0.60) | (0.69) | (12.41) | (0.76) | (0.91) |
| *Individual treatments by cash amount* | | | | | | | |
| Cash 250 | -0.37 | -0.72 | -0.12 | -0.11 | -18.51 | 0.34 | -0.89 |
| | (0.81) | (0.80) | (0.72) | (0.83) | (20.06) | (0.96) | (1.12) |
| Cash 500 | 1.80** | 1.44* | 2.40*** | 2.31*** | -12.37 | 2.12** | 0.62 |
| | (0.86) | (0.83) | (0.84) | (0.89) | (9.76) | (0.97) | (1.15) |
| Cash 750 | 2.54** | 1.17 | 2.26*** | 3.30*** | -38.81* | 2.96** | 1.97 |
| | (1.11) | (1.04) | (0.87) | (1.10) | (21.65) | (1.21) | (1.35) |
| | | | | | | | |
| Control mean | 10.90 | 10.07 | 11.03 | 11.14 | 24.45 | 11.75 | 10.83 |
| Control SD | 20.57 | 19.11 | 19.36 | 19.83 | 59.59 | 19.94 | 20.91 |
| *p*-value (all three equal) | 0.008 | 0.028 | 0.006 | 0.004 | 0.128 | 0.083 | 0.135 |
| Observations | 5,379 | 2,738 | 5,022 | 3,914 | 55 | 3,756 | 1,745 |

Note: Regressions include baseline measurement, strata fixed effects, and indicator for market access treatment. Standard errors clustered at the village level in parentheses. ***, **, and * represent significance at 1%, 5%, and 10%, respectively.