COMPARING CASH AND ASSET TRANSFERS TO LOW-INCOME HOUSEHOLDS IN SOUTH SUDAN

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Abstract. Studies have found that the "graduation" model can be effective in alleviating the constraints that prevent extremely poor households from increasing their productivity and income. This consists of a sizable transfer of productive physical capital coupled with training and coaching over the course of one or two years. Related, there is evidence that a simpler program of unconditional cash transfers (UCT's) may also improve household productivity and welfare. Our field experiment provides a comparison of these two approaches to transferring wealth to low-income households during the first two years of BRAC's ultra-poor pilot project in South Sudan. We consider the effect of each program on consumption, income, asset holdings, and several intangible outcomes. We find evidence that both types of transfer have positive effects on consumption, but only in the short-run. We find a persistent increase in asset stocks, but only from the graduation program. We also consider the graduation program's effect on households' responses to the outbreak of violence in 2014 civil war, and elicit suggestive evidence that BRAC's support may have helped the beneficiaries to cope with the short-term economic effects of the violence. We conclude that in this economic context, cash can increase household consumption, but the goal of improving income or wealth is aided by the additional services that the ultra-poor graduation model offers.

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1. Introduction

What intervention(s) effectively alleviate poverty and can provide sustainable livelihoods to the extreme poor? This question remains central in development economics. The Ultra-Poor Graduation Model (UPG) – an approach of combining multifaceted support services to address both immediate needs of the ultra-poor by giving them consumption supports and their long-term need for a sustainable livelihood by providing them a grant of productive assets coupled with technical skills training—has been successful in reducing extreme poverty in a wide range of contexts (Bandiera et al. 2017; Banerjee et al. 2015). In parallel, an alternative poverty alleviation approach that has gained new interest in recent years involves offering poor households direct, unconditional cash transfers (UCT's) (Haushofer and Shapiro 2016; Blattman et al. 2016). Currently, evidence on these two (sometimes competing) frameworks indicates that UCT are more cost-effective in the short-run, but that the graduation model has more convincing evidence of the long-term impacts (Sulaiman 2018).

Long-term follow-up studies of the UPG model show that the impacts not only persist but also grow over 7 to 10 years in West Bengal (Banerjee et al. 2016; Banerjee, Duflo, and Sharma 2020) and up to 14 years in Bangladesh (Balboni et al. 2020). Haushofer and Shapiro (2018) also find the short-term (9 months after program start) positive impacts of UCT on household assets and consumption sustained in their 3-year follow-up survey, although their estimates depend on the choice of control group (Özler 2018). In their long-term follow-up survey, Blattman, Fiala, and Martinez (2020) find that the impacts of cash transfers dissipated in Uganda after 9 years. While comparing results across evaluations have various limitations, a few studies have emabarked on comparing the two models in the same setting (Sedlmayr, Shah, and Sulaiman 2020) or comparing asset versus in-kind transfers (e.g., Fafchamps et al. 2014).

While the UCT and the UPG models are both direct capital transfer interventions, they are very different in their approaches. The UPG model guides and constrains the use of capital towards productive investment, while UCT's allow households to invest, save, and consume as they see fit. The UPG program includes a sequence of support packages that include a grant of productive assets, business mentoring, life-skills training, short-term consumption support, and access to savings. The goal of the grant transfer is to help the poor start micro-enterprises while other components are related to either protecting their enterprises or increasing income from them. In contrast to the UPG model, the UCT programs follow a straightforward rationale—putting the development and social protection resources directly in the hands of poor people and letting them use these resources as they see best. The natural question that arises is whether (and how) these additional features and constraints in the UPG framework change how households use their capital transfers. This study provides an experimental evaluation of the two approaches in the same setting in South Sudan.

The results from our field experiment show that both types of transfer positively impact consumption, but only in the short run (about 6 months after transfer). The UPG treatment leads to a significant increase in stocks of physical assets in our endline (12–18 months after transfer); the UCT treatment does not. There is also suggestive evidence that UPG support may have helped these beneficiaries cope with the short-term economic effects of the outbreak of violence in South Sudan in 2014. It appears that in this context, cash can increase household consumption, but the goal of improving income or wealth was aided by the additional services that the UPG model offers.

Our results contribute to the literature in a two important ways. First, this is one of the few experiments attempting to directly compare these two approaches of transfer programs in the same population. Second, this evaluation is conducted in a conflict-affected context where cash transfers are a common tool in humanitarian programming despite limited evidence of their impacts. With this introduction, Section 2 describes the experiment and the interventions. Section 3 describes the data, Section 4 our empirical strategy, and results are discussed in Section 5.

2. The Program

The UPG model and the UCT program studied in this paper come from a randomized field experiment that was implemented in collaboration with BRAC South Sudan. The project was supported by the Global Poverty Alleviation Fund and was implemented in the Yei town of the Central Equatoria region.

2.1. **Beneficiary Selection and Randomization.** BRAC began their project implementation in April 2013 by conducting a census of all households having at least one adult women within the operational area of BRAC's office in Yei. The census interview included questions to assess their eligibility to be beneficiaries; a program goal was to enroll only "ultra-poor" households who were unlikely to migrate. Details of the eligibility criteria are given in Morel and Chowdhury (2015).

The census covered 1279 households, of which 755 were found to be eligible. We then conducted a baseline survey of these eligible households, successfully interviewing 649. Among those who were interviewed at the baseline, 250 were randomly assigned to participate in the UPG program, 125 were randomly assigned to a UCT group, and the remaining 274 households were assigned to the control group. Randomization was done stratifying on four binary household characteristics (viz. below median number of income earners, below median of assets owned, whether involved in agriculture and whether has a business). The study was registered on RIDIE (study ID #RIDIE-STUDY-ID-5450e3f81fbc6).

2.2. **The Ultra-Poor Graduation Program.** The UPG program itself is similar to the other graduation programs implemented by BRAC elsewhere in terms of the core components—see Bandiera et al. (2017) for the model in Bangladesh and Banerjee et al. (2015) for pilots in six-countries. Based on its assessment of the local markets, BRAC designed several possible enterprises for the beneficiaries: goat husbandry, duck husbandry, maize cultivation, vegetable cultivation, and trade in dried fish. The preferences of enrolled households over these different enterprises were elicited at baseline. Trading of dried fish was the most popular enterprise, with animal husbandry (goats then ducks) the second and third choices. Crop cultivation (whether of vegetables or maize) was less popular. Similar to other graduation initiatives, the number of households to be given each kind of asset was set in advance, with 75 enrolled in agricultural activities (either maize or vegetable cultivation), 85 in duck rearing, 45 in goat rearing, and the remaining 40 in small trade involving dried fish. Within these limits, assignment to particular enterprises for each household was made at the discretion of program staff after taking into account participants' preferences and skills.

One eligible women from each household (the primary recipient) attended two training sessions. The first of these was for general business skills, including literacy, numeracy, and financial management. The next was sector-specific and focused on participants' respective

enterprises. After these enterprise orientations were completed, asset transfers began in late 2013 and continued through the first few months of 2014. The productive assets related to each enterprise were valued at around $240 per household, with a random subset receiving an additional $60 top-up in assets later in 2014. Shortly after that, households started to attend weekly or semiweekly meetings with other nearby participants to discuss the details of their businesses with each other and a BRAC extension officer. In these group meetings, the participants also received food transfers for a while, which were designed to help get households to the point of obtaining revenue from their assets without having to sell them. The market value of these food transfers was valued at $110, bringing the total value of all transfers to either $350 or $410.

2.3. **Unconditional Cash Transfers.** Households assigned to this treatment arm received a cash transfer of either $350 or $410, matching the values of assets received by households in the UPG treatment. Local community leaders were approached in advance of talking to individual households to reassure recipients regarding BRAC's intentions. It was made clear that the transfers were there for their benefit, and that while they were encouraged to put them towards some productive use, their use was unrestricted, and that under no circumstances would they receive a second transfer in the future. BRAC was a well-established institution in the greater Yei community, so these assurances were taken as credible, and no one refused to accept the money. Cash transfers were delivered by field officers in person and in the local currency (South Sudanese Pounds, or SSPs). The cash transfers in our study differ from several other cash transfer evaluations. For example, Haushofer and Shapiro (2016) deposited funds in a bank or mobile money account, while Fafchamps et al. (2014) used money transfers. Since experimental studies of the behavioral implications of savings accounts Dupas and Robinson (2013) show that the disbursal method might affect the propensity to save a cash transfer, the results of our experiment may not be directly comparable to other evaluations of UCT.

3. The Data

We have four principal sources of data. First, as discussed above, we conducted a census of households with women in the area around BRAC's offices in April of 2013. Second, in the summer of 2013 we conducted a baseline survey of eligible households. We randomly assigned women who responsed to this baseline survey to one of the UPG, UCT, or control groups; some randomly selected UPG and UCT assignees were further chosen to receive an asset or cash "top-up" valued at $60. Third, we conducted a "midline" survey in June 2014, and an "endline" survey in the summer of 2015.

Training and asset transfers for the UPG group began in late 2013; our intention was to make transfers of cash to the UCT group at roughly the same time that UPG participants were ready to begin their operations, during the first quarter of 2014. However, these plans were complicated by an onset of broad civil unrest in South Sudan, and disruption of BRAC's operations.

In response to the outbreak of violence in late 2013 and subsequent closing of the offices in Yei, we conducted a midline survey in June 2014 to try to separate pre- and post-conflict changes in outcomes. We cannot test any claims about the effect of the conflict on outcomes for lack of a valid comparison group, though we do report estimates of treatment effects on the severity or likelihood of having been exposed to the conflict. Some of the original asset

transfers were done before the office closure, which may affect estimates of the difference between programs if rates of return changed in the few intervening months. Finally, we conducted an endline survey in mid-2015 to estimate the effect of program participation on households' financial situation and overall welfare. The key here is that the survey conducted in mid-2014 provides us with *short-term* treatment effects of the UPG program within 6–8 months of the asset transfers, while providing a second baseline for the UCT treatment. Likewise, the 2015 survey allows us to estimate treatment effects one year after the cash transfers, and 15–18 months after the asset transfers.

3.1. **Balance, Attrition, Selection.** In Appendix A we examine in detail whether the randomly assigned treatment groups are balanced on observables; the attrition of households from the sample; and whether this attrition is selective, varying systematically either with assignment or baseline characteristics of the household.

The means of a long list of household characteristics are balanced across groups, with minor exceptions attributable to chance (a larger share of households in the UCT group owned motorcycles at baseline, and the same group had made larger average purchases of textiles during the past year; see Appendix Tables 12 and 13).

Given the environment, attrition was quite low (see Appendix Table 14). We attempted to survey 755 eligible households in total. Of these, 649 were surveyed at baseline, 606 at midline, and 700 at endline. Thus, the probability of an eligible household being interviewed in 2013 was 87%, falling to 81% in 2014, and rising to 93% in 2015. However, households in the control group were significantly less likely to be interviewed at baseline (Appendix Table 15). In order to take advantage of the households not included in the baseline, as well as to deal with any issues with imperfect balance on observables, our specification below follows Banerjee et al. (2015) by setting missing values to zero when controlling for baseline levels of the dependent variable, and including an indicator for whether the household was in the baseline, in a sort of adjusted ANCOVA specification of the sort discussed by McKenzie (2012).

4. Empirical Strategy

We estimate a single model using interactions between time effects and group assignment, as well as baseline values of the outcome variable where available; this is

$$Y_{it} = \alpha_t + \beta^t_{UCT} I_t \times UCT_i + \beta^t_{UPG} I_t \times UPG_i + \gamma Y_{i,2013}(1 - M_{i,2013}) + \delta M_{i,2013} + \epsilon_{it}, \quad (1)$$

for $t \in \{2014, 2015\}$, with i indexing households. The α_t are time fixed effects; I_t is an indicator if the year is t; and Y_{it} is an outcome of interest for household i in year t. If baseline values of the dependent variable are missing for household i then this is indicated by the dummy variable $M_{i,2013}$. Thus, baseline values of the dependent variable appear as $Y_{i,2013}$ where these are non-missing; but the coefficient δ estimates the average baseline value conditional on it being missing.

We take the interactions of UPG assignment with 2014 and 2015 indicators as the treatment effects at 6–8 and 15–17 months respectively. The analogous interactions with the UCT group offer a second baseline and a 12-month treatment effect, respectively. Since those transfers happened after the midline survey, its interaction with I_{2014} acts as a placebo; there is no *ex ante* reason to expect that households in the UCT group were different from

the rest of the control group at that point. Given the slight difference in timing, we report a t-test of the hypothesis $\beta^t_{UPG} = \beta^{2015}_{UCT}$ for both of $t \in \{2014, 2015\}$.

Since the comparison between (UPG,2014) and (UCT,2015) allows for something less than a year of exposure to the respective treatments, we regard $\beta^{2014}_{UPG} = \beta^{2015}_{UCT}$ as the most interesting hypothesis, but since these points of comparison aren't contemporaneous we can't rule out the possibility that aggregate shocks might have interacted somehow with the two programs differently. Accordingly, we also report $\beta^{2015}_{UPG} - \beta^{2015}_{UCT}$, which has the interpretation as being the difference between the average effect of having been enrolled in either program from its inception until 2015.

Because our various treatments are randomly assigned at the individual level, there is no reason to "cluster" when computing the covariances necessary for inference. Instead, we flexibly allow for unspecified forms of heterogeneity, using the 'HC3' estimator proposed by MacKinnon and White (1985) (note that this is generally regarded as the most conservative of conventional heteroskedasticity consistent estimators of the covariance matrix).

5. Results

5.1. **Assets.** We consider the effects of different treatments on three broad classes of assets. The first is *physical* assets, including livestock, productive assets, and consumer durables. The second are measures of financial assets and transfers, including savings (both in currency and in grain or other food stores) and transfers both into and out of the household. The third is agricultural land, either cultivated or owned.

5.1.1. *Physical Asset Holdings.* We first turn our attention to effects of the different programs on the value of physical assets held. Since UPG households were directly *given* a variety of different assets, for this program this can be regarded as a rather direct test—eight months later, do UPG recipients still own these assets, or have they sold (or eaten) them?

We aggregate physical assets into three distinct groups. The first is consumer "durables", which include things like televisions, bicycles, electric fans, and household furnishings. The second is "livestock", which includes cows, goats, poultry, and other small animals. Third is "production" assets, which includes not only livestock but also other assets plausibly used by the household to generate income, such as farm equipment, mobile phones, carts, sewing equipment, sheds, and shop premises. Finally we have "total" assets, which includes the value of all of the above. When considering values as in Tables 1 or 2 it's worth bearing in mind that this experiment was conducted during a period of high inflation, and all reported values are in nominal terms.

The UPG treatment was successful in inducing participants to hold more assets than either the control or UCT groups, particularly in the form of livestock. The cash (UCT) group did not have a significant increase in the value of assets measured in either 2014 or 2015, save for a barely (at the 10% level) significant increase in production assets in 2014. This contrasts sharply with the UPG group. The UPG group gains significantly more asset wealth than the cash or control groups in both 2014 and 2015, 18 months after receipt of transfers. The total value of assets held by the UPG group is roughly three-quarters more than the control group in 2014 (midline), and roughly 45% more at endline. As one might expect given the design of the program, these differences are due principally to differences in livestock holdings, with values of 378 and 322 SSP more than average for households in the control group in 2014 and 2015, respectively.

TABLE 1. Averages of physical assets owned by the control group in 2015, grouped into consumer durables, livestock, production assets, and total. We measure (i) total value (in SSP) ; (ii) the proportion having nonzero values; and (iii) the log values, conditional on being positive.

	2014			2015		
Outcome	Values (SSP)	Nonzero	Log Values	Values (SSP)	Nonzero	Log Values
Durables	946.37	1.00	6.30	837.35	0.96	6.28
Livestock	204.74	0.35	5.45	203.93	0.41	5.43
Production	184.11	0.88	4.63	120.49	0.91	4.47
Total	1335.22	1.00	6.64	1161.76	0.96	6.61

TABLE 2. Estimated treatment effects by group-year on physical assets, grouped into consumer durables, livestock, production assets, and total. We measure (i) total value (in SSP); (ii) the proportion having nonzero values; and (iii) the log values, conditional on being positive. Asterisks: * $p < 0.01$, ** $p < 0.05$, * $p < 0.10$.

Class	Outcome	β_{UPG}^{2014}	β_{UPG}^{2015}	β_{UCT}^{2014}	β_{UCT}^{2015}	$\beta_{UPG}^{2014} - \beta_{UCT}^{2015}$	$\beta_{UPG}^{2015} - \beta_{UCT}^{2015}$
Values (SSP)	Durables	−48.67	91.08	−147.40	−119.19	70.52	210.27
	$N = 1306$	(108.83)	(109.27)	(124.09)	(122.66)	(163.98)	(164.28)
	Livestock	355.63*	320.42*	−29.89	10.16	345.47*	310.26*
	$N = 1306$	(72.91)	(58.80)	(72.36)	(58.59)	(93.53)	(83.01)
	Production	34.16	13.25	28.23	3.77	30.39	9.48
	$N = 1306$	(26.96)	(14.18)	(38.02)	(14.43)	(30.57)	(20.23)
	Total	355.37**	435.55*	−132.71	−93.05	448.42**	528.59**
	$N = 1306$	(159.28)	(147.98)	(181.56)	(152.35)	(220.41)	(212.39)
Nonzero	Durables	−0.01	−0.00	0.00	0.01	−0.02	−0.01
	$N = 1306$	(0.01)	(0.02)	(0.00)	(0.02)	(0.02)	(0.03)
	Livestock	0.44*	0.38*	−0.01	0.08	0.36*	0.31*
	$N = 1306$	(0.04)	(0.04)	(0.05)	(0.06)	(0.07)	(0.07)
	Production	0.03	−0.01	−0.05	0.02	0.01	−0.03
	$N = 1306$	(0.03)	(0.03)	(0.04)	(0.03)	(0.04)	(0.04)
	Total	−0.01	0.01	0.00	0.01	−0.02	−0.00
	$N = 1306$	(0.01)	(0.02)	(0.00)	(0.02)	(0.02)	(0.02)
Log Values	Durables	0.03	0.06	−0.05	−0.15	0.18	0.21
	$N = 1274$	(0.10)	(0.09)	(0.12)	(0.12)	(0.15)	(0.15)
	Livestock	0.55*	0.46*	−0.19	0.07	0.48*	0.39
	$N = 704$	(0.16)	(0.14)	(0.27)	(0.19)	(0.25)	(0.24)
	Production	0.27**	0.15	0.20	0.17*	0.10	−0.02
	$N = 1176$	(0.12)	(0.09)	(0.16)	(0.10)	(0.16)	(0.14)
	Total	0.43*	0.36*	−0.04	−0.03	0.45*	0.38*
	$N = 1281$	(0.09)	(0.09)	(0.12)	(0.11)	(0.14)	(0.14)

The final two columns of Table 2 consider the difference in the average treatment effect between the UCT and UPG treatments. Here one needs to be thoughtful about the period of comparison, since the UCT treatment was rolled out later than the UPG. Thus, the second-to-last column compares the difference in average asset holdings between the UPG and UCT groups roughly one year after the program began; here we see significantly higher mean UPG asset holdings, in the amount of 727 SSP. The final column instead compares contemporaneous endline asset holdings; here we again see significantly higher holdings for the UPG group.

5.1.2. *Savings.* We next consider more liquid forms of assets, in particular stores of food (principally cereals), financial transfers to and from other households, and savings in a BRAC account. It is common in this community (and most in the region) to store non-perishable food like maize, cassava, or millet as a form of savings. This makes particular sense in a high-inflation context, where the price of grain had doubled in the previous year. More households report saving in food (73%) than in cash (40%). The prevalence of food savings increased in significantly in 2014 for both UPG and UCT groups relative to the control.[1] However (Table 4) the *amount* of food savings conditional on it being positive was only significant for the UPG group, for whom it increased by roughly 30% in 2014, one round after treatment; similarly, after treatment the UCT group saved roughly 20% more in food than either the control or UPG groups in 2015. Households in the UPG group were roughly 7–8% more likely to both give and receive transfers from other households in 2014. The UCT group showed a similar propensity to *receive* transfers in 2014, but did not give significantly more than the control group. On the other hand, one cannot reject the hypothesis that the propensity to both give and receive was equal across both the UPG & UCT groups in 2014. And for both groups the propensity to make transfers was no different from that of the control group in 2015. It's worth noting, however, that transfers and indeed *all* the forms of financial activity we record in Table 4 showed marked increases across all groups in both 2014 and 2015, relative to 2013. The UPG households were strongly encouraged to pay into a savings account maintained by BRAC at each of their weekly meetings. Regardless of their motivation, UPG households held savings accounts at significantly higher rates than both the control and UCT groups (Table 4); roughly 29% more in 2014, and 18% more in 2015. The same is *not* true of amounts of savings. Conditional on having positive savings, UPG groups held roughly 30% *less* than the control group in 2014. This pattern then changes dramatically in 2015, when both the UPG and UCT groups dramatically increase their cash savings relative to the control, with both groups holding over 50% more than the control (again, conditional on holding any savings at all). It is, perhaps, not surprising that the UCT group held large savings in 2015—after all, giving these households cash was the point of the treatment, implemented not long before. Understanding the increase in cash savings for the UPG group is more challenging; are their business investments yielding returns which allow them to save? There may be some of this, but interpreting the increase for the UPG groups must also take into account that the number of UPG households holding positive savings fell from 2014 to 2015 relative to other groups, for which the prevalence of positive savings increased from one third in 2014 to 39% in 2015.

1. Note that food savings was not measured at baseline, so these controls are omitted.

TABLE 3. Averages of savings and transfers for the control group by year, grouped into food stores, the value of transfers both sent and received, and financial savings. We measure (i) total value (in SSP) ; (ii) the proportion having nonzero values; and (iii) the log values, conditional on being positive.

	2014			2015		
Outcome	Values (SSP)	Nonzero	Log Values	Values (SSP)	Nonzero	Log Values
Food Savings	63.53	0.90	3.63	90.67	0.77	4.22
Get Transfer	32.91	0.19	4.45	48.82	0.18	5.08
Give Transfer	26.42	0.14	3.54	12.59	0.08	4.56
Savings	71.67	0.48	4.05	83.83	0.42	4.61

TABLE 4. Treatment effects on savings and transfers by group-year, grouped into food stores, the value of transfers both sent and received, and financial savings. We measure (i) total value (in SSP) ; (ii) the proportion having nonzero values; and (iii) the log values, conditional on being positive. Asterisks: ***** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$.

Class	Outcome	β^{2014}_{UPG}	β^{2015}_{UPG}	β^{2014}_{UCT}	β^{2015}_{UCT}	$\beta^{2014}_{UPG} - \beta^{2015}_{UCT}$	$\beta^{2015}_{UPG} - \beta^{2015}_{UCT}$
Values (SSP)	Food Savings	29.33	-6.24	-3.06	-4.20	33.53	-2.04
	$N = 1306$	(22.22)	(13.99)	(17.29)	(14.77)	(26.69)	(20.35)
	Get Transfer	37.55	-0.97	12.45	9.94	27.61	-10.91
	$N = 1306$	(39.55)	(17.22)	(16.86)	(22.71)	(45.60)	(28.50)
	Give Transfer	-4.82	-4.20	-23.02	1.76	-6.58	-5.97
	$N = 1306$	(22.18)	(5.23)	(21.66)	(12.08)	(25.25)	(13.16)
	Savings	0.59	101.13^{*}	18.56	37.87	-37.28	63.26
	$N = 1306$	(19.48)	(36.68)	(38.29)	(26.05)	(32.53)	(44.99)
Nonzero	Food Savings	-0.07^{**}	-0.00	0.02	0.01	-0.07	-0.01
	$N = 1306$	(0.03)	(0.04)	(0.03)	(0.05)	(0.06)	(0.06)
	Get Transfer	0.06	0.01	0.06	-0.00	0.06	0.01
	$N = 1306$	(0.04)	(0.03)	(0.05)	(0.04)	(0.06)	(0.05)
	Give Transfer	0.04	0.02	0.00	-0.01	0.05	0.03
	$N = 1306$	(0.03)	(0.03)	(0.04)	(0.03)	(0.05)	(0.04)
	Savings	0.21^{*}	0.20^{*}	-0.06	0.04	0.17^{**}	0.16^{**}
	$N = 1306$	(0.04)	(0.04)	(0.06)	(0.06)	(0.07)	(0.07)
Log Values	Food Savings	0.29^{*}	0.05	-0.06	0.19^{*}	0.10	-0.14
	$N = 1073$	(0.10)	(0.09)	(0.12)	(0.11)	(0.15)	(0.14)
	Get Transfer	0.08	0.13	0.29	0.46^{*}	-0.37	-0.33
	$N = 255$	(0.27)	(0.19)	(0.29)	(0.27)	(0.38)	(0.33)
	Give Transfer	0.54^{*}	-0.28	-0.52	0.02	0.52	-0.30
	$N = 159$	(0.33)	(0.25)	(0.39)	(0.46)	(0.57)	(0.53)
	Savings	-0.35^{**}	0.53^{*}	0.13	0.45^{**}	-0.80^{*}	0.08
	$N = 671$	(0.16)	(0.14)	(0.25)	(0.20)	(0.26)	(0.25)

5.1.3. *Land.* We also examine land ownership and cultivation in each year. In 2014 both the UPG and UCT groups were significantly more likely cultivate land than the control group, and also to own it. These differences from the control group disappear by 2015, as the average area cultivated by households in the control group increase from 0.6 fedan (a fedan is 4200 m^2, slightly more than an acre) in 2014 to 0.72 fedan in 2015, while at the same time land owned increases from 0.6 to 0.81 fedan for control households.

TABLE 5. Averages of land cultivated and owned for the control group by year. We measure (i) total area (in fedan) ; (ii) the proportion having any land; and (iii) the log area, conditional on being positive.

	2014			2015		
Outcome	Area (fedan)	Nonzero	Log Values	Area (fedan)	Nonzero	Log Values
Land Cultivated	1.00	0.85	-0.10	0.93	0.76	-0.08
Land Owned	1.15	0.85	0.03	1.20	0.86	0.06

TABLE 6. Treatment effects on land cultivated and owned by group-year. We measure (i) total area (in fedan) ; (ii) the proportion having any land; and (iii) the log area, conditional on being positive. Asterisks: ***** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$.

Class	Outcome	β^{2014}_{UPG}	β^{2015}_{UPG}	β^{2014}_{UCT}	β^{2015}_{UCT}	$\beta^{2014}_{UPG} - \beta^{2015}_{UCT}$	$\beta^{2015}_{UPG} - \beta^{2015}_{UCT}$
Area (fedan)	Land Cultivated	0.16	−0.03	−0.21**	0.20	−0.04	−0.23
	$N = 1306$	(0.11)	(0.09)	(0.10)	(0.17)	(0.20)	(0.19)
	Land Owned	0.42*	0.02	−0.12	0.40	0.02	−0.37
	$N = 1306$	(0.14)	(0.11)	(0.14)	(0.32)	(0.35)	(0.34)
Nonzero	Land Cultivated	−0.02	0.01	−0.06	0.01	−0.03	−0.01
	$N = 1306$	(0.03)	(0.04)	(0.05)	(0.05)	(0.06)	(0.06)
	Land Owned	−0.00	−0.01	−0.03	0.02	−0.02	−0.03
	$N = 1306$	(0.03)	(0.03)	(0.04)	(0.04)	(0.05)	(0.05)
Log Values	Land Cultivated	0.15*	0.03	−0.18	0.23*	−0.07	−0.19*
	$N = 1042$	(0.08)	(0.08)	(0.11)	(0.08)	(0.11)	(0.11)
	Land Owned	0.25*	0.07	−0.12	0.19**	0.06	−0.12
	$N = 1114$	(0.08)	(0.08)	(0.11)	(0.09)	(0.12)	(0.12)

5.2. **Income.** Income was reliably measured only in 2015, and so our estimates do not control for baseline values or allow for estimation of treatment effects in different years. The control group in 2015 has a measured income of roughly 4300 SSP per year, or roughly $540 US (assuming an exchange rate of around 8). We estimate positive impacts on total income for both the UPG and UCT groups, but only the former of these is statistically significant (Table 7).

We saw earlier that the UPG group was more likely to hold positive amounts of livestock, consistent with the design of the program. Table 7 further reveals that the UPG group

is also significantly more likely to receive positive amounts of income from livestock (even though the average difference in livestock income between the UPG group and others is not significant). Further, conditional on having positive livestock, the UPG group obtains 0.53 log points more income from that livestock than does the control group, and 0.60 log points more than the UCT group.

TABLE 7. Estimated treatment effects by group on reported income from different sources. We measure (i) total value (in SSP); (ii) the proportion having nonzero values; and (iii) the log values, conditional on being positive. Asterisks: * $p < 0.01$, ** $p < 0.05$, * $p < 0.10$.

Class	Outcome	β_{UPG}	β_{UCT}	Constant	$\beta_{UPG} - \beta_{UCT}$
Values (SSP)	Farm	−137.45	60.12	906.03*	−197.57
	$N = 522$	(98.53)	(138.09)	(71.24)	(169.64)
	Livestock	474.63*	4.36	368.42*	470.27**
	$N = 522$	(140.49)	(128.82)	(88.23)	(190.61)
	Non-Farm	994.62	721.94	3630.45*	272.68
	$N = 631$	(1039.44)	(1121.48)	(287.45)	(1529.10)
	Total	1250.54	658.46	4451.08*	592.08
	$N = 664$	(1010.21)	(1064.05)	(302.38)	(1467.22)
Nonzero	Farm	−0.00	0.01	0.99*	−0.01
	$N = 522$	(0.01)	(0.01)	(0.01)	(0.01)
	Livestock	0.40*	0.18*	0.40*	0.22*
	$N = 522$	(0.04)	(0.06)	(0.03)	(0.08)
	Non-Farm	0.05	0.06	0.83*	−0.01
	$N = 631$	(0.03)	(0.04)	(0.02)	(0.05)
	Total	0.03**	0.00	0.96*	0.03
	$N = 664$	(0.01)	(0.02)	(0.01)	(0.03)
Log Values	Farm	−0.15	0.01	6.18*	−0.16
	$N = 518$	(0.12)	(0.17)	(0.08)	(0.20)
	Livestock	0.53*	−0.07	5.84*	0.60**
	$N = 296$	(0.16)	(0.23)	(0.14)	(0.28)
	Non-Farm	−0.12	−0.26	7.76*	0.14
	$N = 538$	(0.12)	(0.18)	(0.08)	(0.22)
	Total	0.15	−0.04	7.79*	0.19
	$N = 645$	(0.11)	(0.16)	(0.07)	(0.20)

5.3. **Consumption.** The next outcome of interest we consider is household consumption, defined as the market value of goods or services used by the household. A sizable basket of goods were included in the survey module. These are separated into three categories: Food items (with a 3-day recall window), non-durables (a 30-day recall window), and durables and large expenditures (a one-year recall window). We think that data on consumption provides the most appropriate measure of household welfare in our survey.

Table 9 reports on consumption expenditures aggregated according to the period of recall. There were large changes in prices during the course of our experiment, and small changes in the way the survey elicited item-level expenditures. Both of these kinds of changes make comparisons across time difficult to interpret, and might make comparisons of total consumption misleading.

These data do permit us to answer the central question we're interested in: what are the effects on consumption, about eight months later, of enrolling randomly selected households into the UPG program versus giving them a cash transfer of roughly equal value? We measured the effect of cash on a three-day recall of food consumption 12 months after the transfer, and find a statistically significant (at the 10% level) increase of 16 SSP per day. We first measured the effect of the UPG program on average food consumption 6–9 months after the asset transfers, and found a slightly larger effect of 17 SSP. The differences between these two are not significant (see the t-test in the row labeled $\beta^{2014}_{UPG} - \beta^{2015}_{UCT}$), and both result in a 13–17% increase in the value of food expenditures relative to the control group mean in 2015.

Turning our attention to consumption expenditures involving a monthly recall period, both programs have positive effects of similar magnitude, significant at the 10% level. Differences between the two are not significant.

At annual frequencies households in the UPG program have significantly greater expenditures (462 SSP) than the control group, but we cannot reject the null hypothesis that the treatment effects of UPG and UCT are equal.

TABLE 8. Averages of consumption expenditures for the control group by year. Food expenditures are for the past three days, non-durable non-food for the past month, and durables the past year.

	2014			2015		
Outcome	Values (SSP)	Nonzero	Log Values	Values (SSP)	Nonzero	Log Values
Food	79.98	1.00	4.21	110.34	0.99	4.49
Monthly	254.28	1.00	5.07	288.60	0.99	5.33
Yearly	843.29	0.97	6.11	1051.76	0.95	6.15

It is worth noting that the effects of the UPG program on consumption are not persistent—two years after the distribution of assets (in 2015) the average consumption expenditures in the UPG group are not significantly different from that of the control across all types of consumption. The delayed roll-out of UCT intervention means that we can't measure the two-year effects of this program on these measures of consumption.

5.4. **Food Insecurity.** There is some evidence that the increase in consumption expenditures for the UPG group in 2014 translates into greater food security. In each year, we elicit information on roughly how many days during the most recent month the respondent has had experiences indicative of food insecurity. Included are (from top to bottom of Table 10) eating "less preferred" foods; eating just a "few kinds" of foods; eating "fewer meals"; eating "limited portions"; having "no food [at all] in the house"; been able to eat "no preferred" foods; "went to sleep hungry"; going a "whole day without eating"; and being "worried" about not having enough food. The columns corresponding to 2014 and 2015 can

TABLE 9. Effect on consumption expenditures with different periods of recall. Food expenditures are for the past three days, non-durable non-food for the past month, and durables the past year. Asterisks: * $p < 0.01$, ** $p < 0.05$, * $p < 0.10$.

Class	Outcome	β_{UPG}^{2014}	β_{UPG}^{2015}	β_{UCT}^{2014}	β_{UCT}^{2015}	$\beta_{UPG}^{2014} - \beta_{UCT}^{2015}$	$\beta_{UPG}^{2015} - \beta_{UCT}^{2015}$
Values (SSP)	Food	18.41^{*}	1.82	-3.80	14.18	4.23	-12.36
	$N = 1306$	(4.83)	(6.29)	(5.53)	(8.93)	(10.15)	(10.92)
	Monthly	59.23^{**}	34.76	32.96	69.81	-10.58	-35.06
	$N = 1306$	(29.19)	(30.43)	(43.39)	(43.90)	(52.72)	(53.42)
	Yearly	435.43^{**}	-8.48	-170.68	-48.24	483.67	39.77
	$N = 1306$	(198.13)	(161.99)	(129.71)	(223.35)	(298.56)	(275.91)
Nonzero	Food	0.01	0.00	-0.01	0.00	0.00	0.00
	$N = 1306$	(0.00)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
	Monthly	-0.01	0.00	-0.03^{*}	0.01^{*}	-0.01^{**}	-0.01
	$N = 1306$	(0.00)	(0.01)	(0.02)	(0.01)	(0.01)	(0.01)
	Yearly	0.02	0.01	0.00	-0.01	0.02	0.02
	$N = 1306$	(0.01)	(0.02)	(0.02)	(0.02)	(0.03)	(0.03)
Log Values	Food	0.21^{*}	0.03	0.00	0.14^{*}	0.07	-0.12
	$N = 1297$	(0.06)	(0.06)	(0.06)	(0.08)	(0.10)	(0.10)
	Monthly	0.33^{*}	0.12^{*}	0.12	0.18^{*}	0.15	-0.06
	$N = 1296$	(0.08)	(0.07)	(0.11)	(0.10)	(0.13)	(0.12)
	Yearly	0.13	-0.03	-0.10	0.09	0.04	-0.12
	$N = 1260$	(0.12)	(0.13)	(0.13)	(0.14)	(0.19)	(0.20)

be interpreted as the average number of days per month people who report experiencing each.

Average levels of these variables indicate very high food insecurity; for instance, the the average respondent is "worried" about 15 days out of the month, and reports going for 5–7 whole days without eating during the most recent month. There is also a definite decrease in food security between 2014 and 2015.

Since our examination of the log value of consumption expenditures (and in particular food) turned up significant average treatment effects for the UPG (in 2014) and UCT groups (in 2015), one wonders whether these increases in food expenditures help to significantly reduce food insecurity. And indeed, there's some very modest evidence that's consistent this; in 2014 UPG households "went to sleep hungry" nearly one day less during the month than did the control group, and worried nearly two days less. But these effects are not estimated very precisely, and the claimed significance would not survive any standard multiple inference correction.

Though there are certainly multiple outcomes we're estimating here, they are all attempts to measure some latent "food insecurity". So in this spirit we calculate the first principal components of the matrix of food insecurity measures, one for each household-year. But though the signs of the effects associated with this summary measure are consistent with the UPG program having a small effect on food security, none are statistically significant.

TABLE 10. Effects of programs on different measures of food insecurity. Asterisks: * $p < 0.01$, ** $p < 0.05$, * $p < 0.10$.

Outcome	β_{UPG}^{2014}	β_{UPG}^{2015}	β_{UCT}^{2014}	β_{UCT}^{2015}	2014	2015	Baseline value	Baseline missing	$\beta_{UPG}^{2014} - \beta_{UCT}^{2015}$	$\beta_{UPG}^{2015} - \beta$
Ate less preferred	0.41	−0.32	−1.61*	1.16	10.40*	12.01*	−0.18	−2.21*	−0.75	−1.49
$N = 1297$	(0.73)	(0.67)	(0.82)	(0.92)	(0.70)	(0.66)	(0.18)	(0.81)	(1.18)	(1.14)
Few kinds	1.02	0.71	−0.39	1.40	10.78*	13.22*	−0.46**	−1.96**	−0.38	−0.69
$N = 1297$	(0.73)	(0.71)	(0.90)	(0.94)	(0.75)	(0.72)	(0.21)	(0.88)	(1.19)	(1.18)
Fewer Meals	0.16	0.91	−0.27	−0.04	8.94*	10.68*	−0.31*	−1.63**	0.20	0.94
$N = 1297$	(0.65)	(0.65)	(0.76)	(0.81)	(0.60)	(0.57)	(0.18)	(0.72)	(1.04)	(1.04)
Limited portions	0.33	−0.35	−0.21	−0.41	8.02*	10.49*	0.14	−0.81	0.75	0.06
$N = 1292$	(0.68)	(0.65)	(0.77)	(0.85)	(0.63)	(0.61)	(0.16)	(0.73)	(1.09)	(1.07)
No food in house	−0.54	−0.54	−0.21	−0.03	5.63*	8.86*	−0.10	0.06	−0.52	−0.51
$N = 1293$	(0.48)	(0.65)	(0.58)	(0.85)	(0.54)	(0.61)	(0.16)	(0.74)	(0.98)	(1.07)
No preferred	0.32	−0.35	−0.65	1.72*	10.97*	13.81*	−0.40*	−2.16**	−1.40	−2.07
$N = 1297$	(0.75)	(0.75)	(0.89)	(1.02)	(0.74)	(0.74)	(0.23)	(0.90)	(1.26)	(1.26)
Went to sleep hungry	−0.94**	0.14	−0.46	0.77	5.45*	7.86*	−0.18	−1.21	−1.71*	−0.63
$N = 1297$	(0.43)	(0.67)	(0.58)	(0.91)	(0.58)	(0.67)	(0.16)	(0.76)	(1.01)	(1.12)
Whole day without eating	−0.54	0.23	−0.13	0.92	4.97*	7.55*	−0.08	−0.81	−1.46	−0.69
$N = 1282$	(0.46)	(0.68)	(0.63)	(0.96)	(0.60)	(0.67)	(0.15)	(0.72)	(1.06)	(1.18)
Worried	−1.76*	−1.05	0.54	0.40	14.94*	15.57*	−0.33	−2.26**	−2.16	−1.45
$N = 1291$	(1.00)	(0.83)	(1.29)	(1.09)	(0.89)	(0.77)	(0.26)	(1.02)	(1.48)	(1.37)
Score (1st PC)	0.03	0.03	0.06	−0.10	0.08	−0.29	−0.40*	−0.14	0.13	0.14
$N = 1299$	(0.08)	(0.09)	(0.10)	(0.12)	(0.19)	(0.20)	(0.22)	(0.20)	(0.14)	(0.15)

5.5. **Exposure to Conflict.** In 2014, households were surveyed shortly after BRAC's offices had re-opened in the wake of the outbreak of widespread armed conflict. Respondents were asked a short set of questions about whether they were directly affected, and if so, in what way. There had only been a few incidents of violence near Yei town at that point, and the most directly involved ethnic groups made up a small portion of the local population. There is no clear comparison group to which we might compare our sample, and the economic climate changed over this same period in several ways that were probably not directly caused by the violence. We have no clear means of identifying the effect of the conflict itself on household welfare. Nonetheless, it is interesting to consider correlates with self-reported exposure to the conflict, and to see if program assignment had any effect on households' reported exposure or response.

In Table 11, the UCT group is included with controls because the cash transfers weren't given out until immediately after the midline survey, and this table uses data from the midline survey. All variables are binary variables.

Our main outcomes of interest are whether individuals say they were *"Worried"* or "directly *Affected*" by the violence, unable to invest (*"NoInvest"*) in a farm or business as a result, *"Migrated"* as a cautionary measure, or did something else to *"ProtectLives"* of family members. A final question among those who took no cautionary measures was whether this because they did not have the means (*"NoMeans"*).

Overall, nearly all households were worried (93%), and 37% migrated to avoid violence; 31% also did something else to protect the lives of their family members. In these reactions UPG households were not detectably different from the control group. However, UPG households were significantly (13 pp.) less likely to report that they were directly affected by violence; also 8 pp. less likely to report that their ability to invest in land or business was affected by the conflict; and 11 pp. less likely to report that any *lack* of action was due to a lack of means. All these significant differences seem to indicate that the UPG program had some mitigating effect on the effects of conflict on the household.

6. Conclusion

BRAC's South Sudan pilot of the UPG program represents the only such test of the ultra-poor graduation framework conducted in an area of significant political and economic instability. It also represents one of the only direct comparisons of this model to a similarly expensive unconditional cash transfer, arguably the most sensible benchmark for success. Though our study does not generalize to contexts with high-functioning cash economies and relative political stability, within its context it provides some clues about the benefits of both UPG and UCT programs.

Cash transfers appear to increase consumption and possibly shift investment from agriculture to non-farm activities, without a related significant increase in wealth or income. Conversely, the UPG program increased wealth and directly shifted work from agriculture to livestock, with increased consumption in the short run. We also find that having received asset transfers dampened the negative investment effects following the outbreak of violence. Because of differences in timing we cannot say whether a cash transfer would have had a similar mitigating effect. Our results support the view that targeted asset transfers can play a constructive role in helping poor, self-employed households when they face economic uncertainty. And while cash increases household consumption, the goal of improving income

TABLE 11. Average treatment effects for UPG in 2014 on the probability of having been affected in a significant way by the outbreak of violence in late 2013. Asterisks: * $p < 0.01$, ** $p < 0.05$, * $p < 0.10$.

Outcome	Constant	β_{UPG}
Worried	0.93^{*}	-0.02
$N = 603$	(0.01)	(0.02)
Affected	0.53^{*}	-0.13^{*}
$N = 601$	(0.03)	(0.04)
NoInvest	0.18^{*}	-0.08^{*}
$N = 606$	(0.02)	(0.03)
Migrated	0.37^{*}	-0.00
$N = 606$	(0.02)	(0.04)
ProtectLives	0.31^{*}	0.04
$N = 585$	(0.02)	(0.04)
NoMeans	0.54^{*}	-0.11^{**}
$N = 402$	(0.03)	(0.05)

or wealth is well served by the additional services that the ultra-poor graduation framework offer.

7. References

Balboni, Clare, Oriana Bandiera, Robin Burgess, Maitreesh Ghatak, and Anton Heil. 2020. *Why do people stay poor?* Technical report, Economic Organisation and Public Policy Discussion Papers Series 067. Suntory, Toyota International Centres for Economics, and Related Disciplines, LSE.

Bandiera, Oriana, Robin Burgess, Narayan Das, Selim Gulesci, Imran Rasul, and Munshi Sulaiman. 2017. Labor markets and poverty in village economies. *The Quarterly Journal of Economics* 132 (2): 811–870.

Banerjee, Abhijit, Esther Duflo, Raghabendra Chattopadhyay, and Jeremy Shapiro. 2016. The long term impacts of a 'graduation' program: evidence from West Bengal. Unpublished manuscript.

Banerjee, Abhijit, Esther Duflo, Nathanael Goldberg, Dean Karlan, Robert Osei, William Parienté, Jeremy Shapiro, Bram Thuysbaert, and Christopher Udry. 2015. A multifaceted program causes lasting progress for the very poor: evidence from six countries. *Science* 348 (6236).

Banerjee, Abhijit, Esther Duflo, and Garima Sharma. 2020. *Long-term effects of the targeting the ultra poor program.* Technical report, Working Paper Series w28074. National Bureau of Economic Research. `http://www.nber.org/papers/w28074`.

Blattman, Christopher, Nathan Fiala, and Sebastian Martinez. 2020. The long-term impacts of grants on poverty: nine-year evidence from Uganda's Youth Opportunities Program. *American Economic Review: Insights* 2 (3): 287–304.

Blattman, Christopher, Eric P. Green, Julian Jamison, M. Christian Lehmann, and Jeannie Annan. 2016. The returns to microenterprise support among the ultrapoor: a field experiment in postwar uganda. *American Economic Journal: Applied Economics* 8 (2): 35–64.

Dupas, Pascaline, and Jonathan Robinson. 2013. Why don't the poor save more? Evidence from health savings experiments. *American Economic Review* 103 (4): 1138–71.

Fafchamps, Marcel, David McKenzie, Simon Quinn, and Christopher Woodruff. 2014. Microenterprise growth and the flypaper effect: evidence from a randomized experiment in Ghana. *Journal of development Economics* 106:211–226.

Haushofer, Johannes, and Jeremy Shapiro. 2016. The short-term impact of unconditional cash transfers to the poor: experimental evidence from Kenya. *The Quarterly Journal of Economics* 131 (4): 1973–2042.

———. 2018. The long-term impact of unconditional cash transfers: experimental evidence from Kenya. Working paper. `https://jeremypshapiro.appspot.com/papers/Haushofer_Shapiro_UCT2_2018-01-30_paper_only.pdf`.

MacKinnon, James G, and Halbert White. 1985. Some heteroskedasticity-consistent covariance matrix estimators with improved finite sample properties. *Journal of econometrics* 29 (3): 305–325.

McKenzie, David. 2012. Beyond baseline and follow-up: The case for more T in experiments. *Journal of Development Economics* 99 (2): 210–221.

Morel, Ricardo, and Reajul Chowdhury. 2015. Reaching the ultra-poor: adapting targeting strategy in the context of South Sudan. *Journal of International Development* 27 (7): 987–1011.

Özler, Berk. 2018. Givedirectly three-year impacts, explained. March. `https://blogs.worldbank.org/impactevaluations/givedirectly-three-year-impacts-explained`.

Sedlmayr, Richard, Anuj Shah, and Munshi Sulaiman. 2020. Cash-plus: poverty impacts of alternative transfer-based approaches. *Journal of Development Economics* 144:102418.

Sulaiman, Munshi. 2018. Livelihood, cash transfer, and graduation approaches: how do they compare in terms of cost, impact, and targeting? Chap. 8 in *Boosting growth to end hunger by 2025: the role of social protection,* edited by Fleur Stephanie Wouterse and Alemayehu Seyoum Taffesse, 102–120. Washington, DC: International Food Policy Research Institute (IFPRI). `https://doi.org/https://doi.org/10.2499/9780896295988_08`.

Appendix A. Balance & Selection

A.1. **Balance on Observables.** We start by checking whether either treatment arm appears significantly different from the control group in terms of average baseline observable characteristics. Table 12 presents summary statistics by group on a range of factors related to consumption, asset holdings, and household characteristics. Of all of these baseline characteristics, the only cases in which we can reject the null of equality with the control group are for the value of motorcycles and textiles. The mean value depends on both *whether* a household possesses these assets, and conditional on possession, the value of the asset. Particularly for the case of motorcycles one wonders whether a small difference in rates of ownership might account for the difference, rather than the value of the asset conditional on ownership.

Table 12: Means of some analysis variables at baseline.
Asterisks: ***** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$.

Baseline Characteristics	Control	Δ UPG	Δ UCT	N
Household size	7.232	-0.175	0.3	648
# Child	3.263	0.118	0.108	594
In business	0.398	0.038	0.017	265
Baseline Assets				
Furniture	0.196	-0.014	0.044	368
Large livestock (cows)	253.31	-140.605	-99.681	35
Small livestock	236.601	-86.069	-123.134	123
Bicycle	109.075	-12.554	-11.413	171
Radio	58.448	-5.969	-16.529	260
Motorcycle	341.737	192.956	353.836**	93
Mosquito net	19.164	0.668	0.248	423
Poultry	42.402	-3.365	-8.894	161
Bed	241.27	7.992	32.762	521
Chair/table	206.786	-29.368	3.617	531
Mobile phone	97.537	12.627	-4.199	414
Mosquito net ITN	7.822	1.215	1.178	181
# Houses	2.829	0.03	0.118	543
Baseline Consumption				
Alcohol	0.043	0.006	-0.029	18
Beans	0.696	0.231	0.226	192
Rituals/ceremonies	0.132	0.007	0.026	152
Charities	0.03	-0.006	-0.0	134
Clothing, footwear	0.658	-0.026	0.033	595
Cosmetics	0.682	0.027	-0.125	468
Dowry	1.256	-0.04	0.028	126
Egg	1.096	-0.091	0.038	276

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Baseline Characteristics	Control	Δ UPG	Δ UCT	N
Entertainment	0.087	-0.024	-0.02	145
Fish	2.505	-0.154	-0.156	474
Fruit	0.69	-0.089	0.0	272
Cooking fuel	0.762	-0.039	-0.072	456
Meat	4.205	-0.568	-0.052	378
Milk	1.284	-0.237	-0.232	114
Oil	1.364	-0.131	-0.141	613
Salt	0.447	-0.026	0.007	617
Toiletries	0.483	-0.009	-0.026	536
Spices	0.23	0.024	-0.045	158
Sugar	1.713	-0.078	-0.189	604
Textiles	0.154	-0.005	0.055*	376
Transportation	0.176	-0.033	0.002	193
Utensils	0.246	-0.008	0.008	442
Vegetables	1.543	-0.165	-0.18	471
Cereals	9.187	-0.947	0.27	605

To explore this, Table 13 reports the means of log expenditures, with expenditures of zero treated as missing data; thus these figures are conditional on ownership. We see from this table that there are no significant differences between the control and treatment groups; thus, rejections in the previous table can be attributed to differences in rates of ownership.

Table 13: Means of logs of some analysis variables at baseline. Asterisks: * $p < 0.01$, ** $p < 0.05$, * $p < 0.10$. Zeros are treated as missing.

Variable	Control	Δ UPG	Δ UCT	N
Meat (last three days)	2.845	0.018	0.033	378
Fish (last three days)	2.058	0.041	-0.022	474
Cereals (last three days)	3.033	-0.071	-0.019	605
Sugar (last three days)	1.346	-0.06	-0.031	604
Egg (last three days)	1.811	0.011	-0.077	276
Oil (last three days)	0.897	0.014	-0.035	613
Beans (last three days)	1.669	0.135	0.127	192
Fruit (last three days)	1.329	0.007	0.027	272
Salt (last three days)	0.201	-0.054	0.001	617
Vegetables (last three days)	1.532	-0.026	-0.047	471
Milk (last three days)	2.514	-0.015	-0.217	114
Spices (last three days)	0.858	-0.069	-0.21	158
Alcohol (last three days)	1.304	0.104	0.305	18
Cooking fuel (last month)	2.941	-0.01	-0.127	456

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Variable	Control	Δ UPG	Δ UCT	N
Toiletries (last month)	2.328	-0.051	-0.172	536
Transportation (last month)	2.395	-0.003	0.127	193
Cosmetics (last month)	2.659	0.084	-0.054	468
Entertainment (last month)	2.088	-0.13	-0.064	145
Clothing, footwear (last year)	4.989	-0.005	-0.074	595
Charities (last year)	3.348	-0.229	-0.121	134
Rituals/ceremonies (last year)	4.422	0.261	0.162	152
Textiles (last year)	4.096	0.052	0.112	376
Utensils (last year)	4.352	-0.01	-0.003	442
Dowry (last year)	5.934	0.433	0.178	126
Furniture (last year)	4.224	0.033	0.185	368
Large livestock (cows)	7.461	-0.072	-0.068	35
Small livestock	6.425	-0.195	-0.364	123
Bicycle	5.601	0.051	0.14	171
Radio	4.3	0.067	-0.071	260
Motorcycle	6.762	0.676	0.778	93
Mosquito net	3.089	0.024	-0.008	423
Poultry	4.616	0.002	-0.177	161
Bed	5.306	-0.001	0.116	521
Chair/table	4.889	0.021	0.025	531
Mobile phone	4.811	0.119	0.031	414
Mosquito net ITN	3.147	-0.047	0.13	181
# Houses	1.064	-0.027	-0.0	543
# Child	1.118	0.043	0.039	594
Household size	1.917	-0.021	0.05	648
In business	0.398	0.038	0.017	638

A.2. **Attrition & Selection.** Our census found 755 eligible households, and made efforts to interview a respondent from every one of these households. The degree to which we succeeded is documented in Table 14. In the baseline survey we successfully interviewed 649 of these households; in the midline 606, and in the endline 700. One important question

TABLE 14. Numbers of surveyed households, by group and round. Parenthetical numbers are households surveyed conditional on also being surveyed at baseline.

	Assigned	2013	2014	2015
All	755	649	606 (554)	700 (603)
Control	380	281	265 (219)	353 (262)
UPG	250	244	228 (223)	236 (231)
UCT	125	124	113 (112)	111 (110)

TABLE 15. Probability of completed interview, by round and treatment group.

Group	2013	2014	2015
Control	0.75	0.70	0.94
UPG	0.98	0.92	0.95
UCT	0.99	0.90	0.89

is whether there's *differential* selection by treatment group. Table 15 shows the proportion of *assigned* households actually interviewed by both round and group. There are three things to note about this table. The first is that at baseline and midline the proportion of households interviewed from the control group was significantly lower than for the UPG and UCT groups. The second is that challenges in the field led to a lower probability of a successful interview at midline. The third is that members of the UCT were slightly (but not significantly) less likely to be interviewed at endline.

The relatively low proportion of control households being interviewed in the first two rounds can be attributed to the fact that these households did not have the same consistent contact with BRAC that the UPG & UCT groups had, and this consistent contact was important for locating people in a rural area lacking certain infrastructure (phones, addresses) which might otherwise have made finding households easier, while the lower proportion of households interviewed at midline may be attributable to an early harvest that year.

We explore this further, examining whether a random lack of balance in observable household characteristics at baseline is related to subsequent successful interviews. Table 16 reports the average level of various characteristics in 2013. Then we report the difference in means between households that were in and out of the midline or endline surveys. Note that the sample here consists not of all eligible households, but all households interviewed at baseline. There is one important relationship that emerges: larger households & households with more children were more likely to be interviewed at midline.

Table 16: Means of household baseline characteristics and regression coefficients for whether they were ultimately found at baseline or endline. (Note that this does not consider households found only in 2014 or 2015). Asterisks: ***** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$.

Baseline Characteristics	Mean_{2013}	β_{2014}	β_{2015}
Household size	7.224	0.595**	0.428
# Children	3.328	0.656***	0.423
In business	0.415	0.038	0.007
Baseline Assets			
# Houses	2.863	0.305	0.367
Bed	250.535	12.649	-51.133
Bicycle	102.174	11.179	4.212
Chair/table	196.436	-0.303	-37.177

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Baseline Characteristics	Mean_{2013}	β_{2014}	β_{2015}
Furniture	0.199	-0.023	0.02
Large livestock (cows)	181.402	67.862	-89.273
Mobile phone	101.482	6.336	-13.028
Motorcycle	481.886	213.002	-241.819
Mosquito net ITN	8.504	-1.777	0.449
Mosquito net	19.462	0.332	2.814
Poultry	39.438	23.634*	-2.243
Radio	53.046	-6.333	-35.093*
Small livestock	180.716	18.966	-79.014
Baseline Consumption			
Alcohol	0.04	0.005	-0.004
Beans	0.826	0.269	-0.382
Rituals/ceremonies	0.139	-0.019	-0.038
Charities	0.027	0.007	-0.001
Clothing, footwear	0.655	0.177*	-0.203
Cosmetics	0.668	0.005	0.229
Dowry	1.247	0.745	-0.394
Egg	1.069	-0.005	0.106
Entertainment	0.074	0.021	0.051*
Fish	2.418	-0.132	0.036
Fruit	0.657	0.009	-0.151
Cooking fuel	0.733	0.105	-0.049
Meat	3.982	0.254	0.3
Milk	1.15	0.283	0.239
Oil	1.288	0.037	-0.532*
Salt	0.439	-0.14***	-0.043
Toiletries	0.475	-0.181*	0.047
Spices	0.231	0.024	-0.048
Sugar	1.648	-0.285	-0.02
Textiles	0.163	0.01	0.011
Transportation	0.164	0.004	0.018
Utensils	0.245	0.061	-0.023
Vegetables	1.447	0.096	-0.151

Appendix B. Extended Tables

TABLE 17. Estimated treatment effects by group-year on physical assets, grouped into consumer durables, livestock, production assets, and total. We measure (i) total value (in SSP); (ii) the proportion having nonzero values; and (iii) the log values, conditional on being positive. Asterisks: * $p < 0.01$, ** $p < 0.05$, * $p < 0.10$.

Class	Outcome	β_{UPG}^{2014}	β_{UPG}^{2015}	β_{UCT}^{2014}	β_{UCT}^{2015}	2014	2015	Baseline value	$\beta_{UPG}^{2014} - \beta_{UCT}^{2015}$	$\beta_{UPG}^{2015} - \beta_{UCT}^{2015}$	
Values (SSP)	Durables	−48.67	91.08	−147.40	−119.19	882.10*	783.79*	0.08**	−18.31	70.52	210.27
	$N = 1306$	(108.83)	(109.27)	(124.09)	(122.66)	(83.43)	(71.77)	(0.03)	(103.97)	(163.98)	(164.28
	Livestock	355.63*	320.42*	−29.89	10.16	208.06*	215.58*	0.02	−74.39*	345.47*	310.26*
	$N = 1306$	(72.91)	(58.80)	(72.36)	(58.59)	(42.00)	(31.82)	(0.01)	(44.40)	(93.53)	(83.01)
	Production	34.16	13.25	28.23	3.77	180.54*	119.73*	0.04**	−14.47	30.39	9.48
	$N = 1306$	(26.96)	(14.18)	(38.02)	(14.43)	(18.57)	(9.60)	(0.02)	(17.30)	(30.57)	(20.23)
	Total	355.37**	435.55*	−132.71	−93.05	1233.81*	1086.65*	0.08*	−74.21	448.42**	528.59*
	$N = 1306$	(159.28)	(147.98)	(181.56)	(152.35)	(112.06)	(92.75)	(0.02)	(128.24)	(220.41)	(212.39
Nonzero	Durables	−0.01	−0.00	0.00	0.01	1.00*	0.96*	−0.00	0.01	−0.02	−0.01
	$N = 1306$	(0.01)	(0.02)	(0.00)	(0.02)	(0.01)	(0.02)	(0.02)	(0.02)	(0.02)	(0.03)
	Livestock	0.44*	0.38*	−0.01	0.08	0.33*	0.38*	0.10*	−0.02	0.36*	0.31*
	$N = 1306$	(0.04)	(0.04)	(0.05)	(0.06)	(0.03)	(0.03)	(0.03)	(0.05)	(0.07)	(0.07)
	Production	0.03	−0.01	−0.05	0.02	0.86*	0.89*	0.04*	0.01	0.01	−0.03
	$N = 1306$	(0.03)	(0.03)	(0.04)	(0.03)	(0.02)	(0.02)	(0.02)	(0.03)	(0.04)	(0.04)
	Total	−0.01	0.01	0.00	0.01	1.00*	0.97*	−0.01	−0.00	−0.02	−0.00
	$N = 1306$	(0.01)	(0.02)	(0.00)	(0.02)	(0.01)	(0.01)	(0.01)	(0.02)	(0.02)	(0.02)
Log Values	Durables	0.03	0.06	−0.05	−0.15	6.00*	5.99*	0.05*	0.23*	0.18	0.21
	$N = 1274$	(0.10)	(0.09)	(0.12)	(0.12)	(0.11)	(0.11)	(0.02)	(0.13)	(0.15)	(0.15)
	Livestock	0.55*	0.46*	−0.19	0.07	5.40*	5.43*	0.03**	−0.22	0.48*	0.39
	$N = 704$	(0.16)	(0.14)	(0.27)	(0.19)	(0.15)	(0.12)	(0.02)	(0.23)	(0.25)	(0.24)
	Production	0.27**	0.15	0.20	0.17*	4.49*	4.33*	0.04*	0.13	0.10	−0.02
	$N = 1176$	(0.12)	(0.09)	(0.16)	(0.10)	(0.10)	(0.08)	(0.01)	(0.11)	(0.16)	(0.14)
	Total	0.43*	0.36*	−0.04	−0.03	6.35*	6.34*	0.05*	0.20	0.45*	0.38*
	$N = 1281$	(0.09)	(0.09)	(0.12)	(0.11)	(0.12)	(0.11)	(0.02)	(0.13)	(0.14)	(0.14)

TABLE 18. Treatment effects on savings and transfers by group-year, grouped into food stores, the value of transfers both sent and received, and financial savings. We measure (i) total value (in SSP) ; (ii) the proportion having nonzero values; and (iii) the log values, conditional on being positive. Asterisks: * $p < 0.01$, ** $p < 0.05$, * $p < 0.10$.

Class	Outcome	β^{2014}_{UPG}	β^{2015}_{UPG}	β^{2014}_{UCT}	β^{2015}_{UCT}	2014	2015	Baseline value	Baseline missing	$\beta^{2014}_{UPG} - \beta^{2015}_{UCT}$	$\beta^{2015}_{UPG} - \beta^{2015}_{UCT}$
Values (SSP)	Food Savings	29.33	−6.24	−3.06	−4.20	66.37*	94.90*	0.00	−16.39	33.53	−2.04
	$N = 1306$	(22.22)	(13.99)	(17.29)	(14.77)	(12.67)	(10.30)	(0.00)	(11.11)	(26.69)	(20.35)
	Get Transfer	37.55	−0.97	12.45	9.94	33.38*	49.90*	0.01	−6.04	27.61	−10.91
	$N = 1306$	(39.55)	(17.22)	(16.86)	(22.71)	(7.40)	(12.48)	(0.02)	(11.67)	(45.60)	(28.50)
	Give Transfer	−4.82	−4.20	−23.02	1.76	27.79	15.09*	0.02	−11.50	−6.58	−5.97
	$N = 1306$	(22.18)	(5.23)	(21.66)	(12.08)	(21.83)	(4.84)	(0.02)	(9.06)	(25.25)	(13.16)
	Savings	0.59	101.13*	18.56	37.87	69.23*	83.03*	0.03	−11.60	−37.28	63.26
	$N = 1306$	(19.48)	(36.68)	(38.29)	(26.05)	(15.66)	(14.61)	(0.02)	(16.10)	(32.53)	(44.99)
Nonzero	Food Savings	−0.07**	−0.00	0.02	0.01	0.90*	0.77*	0.00	0.02	−0.07	−0.01
	$N = 1306$	(0.03)	(0.04)	(0.03)	(0.05)	(0.02)	(0.02)	(0.00)	(0.03)	(0.06)	(0.06)
	Get Transfer	0.06	0.01	0.06	−0.00	0.16*	0.15*	0.06**	0.09**	0.06	0.01
	$N = 1306$	(0.04)	(0.03)	(0.05)	(0.04)	(0.03)	(0.02)	(0.03)	(0.04)	(0.06)	(0.05)
	Give Transfer	0.04	0.02	0.00	−0.01	0.13*	0.08*	0.04	−0.01	0.05	0.03
	$N = 1306$	(0.03)	(0.03)	(0.04)	(0.03)	(0.02)	(0.02)	(0.03)	(0.03)	(0.05)	(0.04)
	Savings	0.21*	0.20*	−0.06	0.04	0.45*	0.39*	0.03	0.07	0.17**	0.16**
	$N = 1306$	(0.04)	(0.04)	(0.06)	(0.06)	(0.04)	(0.04)	(0.03)	(0.05)	(0.07)	(0.07)
Log Values	Food Savings	0.29*	0.05	−0.06	0.19*	3.64*	4.23*	0.00	−0.06	0.10	−0.14
	$N = 1073$	(0.10)	(0.09)	(0.12)	(0.11)	(0.06)	(0.06)	(0.00)	(0.09)	(0.15)	(0.14)
	Get Transfer	0.08	0.13	0.29	0.46*	4.45*	5.07*	0.02	−0.04	−0.37	−0.33
	$N = 255$	(0.27)	(0.19)	(0.29)	(0.27)	(0.21)	(0.14)	(0.03)	(0.17)	(0.38)	(0.33)
	Give Transfer	0.54*	−0.28	−0.52	0.02	3.48*	4.50*	0.02	0.24	0.52	−0.30
	$N = 159$	(0.33)	(0.25)	(0.39)	(0.46)	(0.26)	(0.20)	(0.05)	(0.30)	(0.57)	(0.53)
	Savings	−0.35**	0.53*	0.13	0.45**	4.00*	4.58*	0.02	−0.08	−0.80*	0.08
	$N = 671$	(0.16)	(0.14)	(0.25)	(0.20)	(0.15)	(0.13)	(0.02)	(0.18)	(0.26)	(0.25)

TABLE 19. Treatment effects on land cultivated and owned by group-year. We measure (i) total area (in fedan) ; (ii) the proportion having any land; and (iii) the log area, conditional on being positive. Asterisks: * $p < 0.01$, ** $p < 0.05$, * $p < 0.10$.

Class	Outcome	β_{UPG}^{2014}	β_{UPG}^{2015}	β_{UCT}^{2014}	β_{UCT}^{2015}	2014	2015	Baseline value	Baseline missing	$\beta_{UPG}^{2014} - \beta_{UCT}^{2015}$	$\beta_{UPG}^{2015} - \beta_{UCT}^{2015}$
Area (fedan)	Land Cultivated	0.16	−0.03	−0.21**	0.20	0.97*	0.90*	0.02	0.02	−0.04	−0.23
	$N = 1306$	(0.11)	(0.09)	(0.10)	(0.17)	(0.07)	(0.08)	(0.02)	(0.12)	(0.20)	(0.19)
	Land Owned	0.42*	0.02	−0.12	0.40	1.15*	1.21*	0.01	−0.09	0.02	−0.37
	$N = 1306$	(0.14)	(0.11)	(0.14)	(0.32)	(0.08)	(0.09)	(0.02)	(0.11)	(0.35)	(0.34)
Nonzero	Land Cultivated	−0.02	0.01	−0.06	0.01	0.83*	0.75*	0.02	0.00	−0.03	−0.01
	$N = 1306$	(0.03)	(0.04)	(0.05)	(0.05)	(0.03)	(0.04)	(0.03)	(0.05)	(0.06)	(0.06)
	Land Owned	−0.00	−0.01	−0.03	0.02	0.81*	0.81*	0.06*	0.05	−0.02	−0.03
	$N = 1306$	(0.03)	(0.03)	(0.04)	(0.04)	(0.03)	(0.03)	(0.03)	(0.04)	(0.05)	(0.05)
Log Values	Land Cultivated	0.15*	0.03	−0.18	0.23*	−0.11*	−0.09	0.04	0.02	−0.07	−0.19*
	$N = 1042$	(0.08)	(0.08)	(0.11)	(0.08)	(0.05)	(0.05)	(0.04)	(0.08)	(0.11)	(0.11)
	Land Owned	0.25*	0.07	−0.12	0.19**	0.01	0.05	0.05*	−0.02	0.06	−0.12
	$N = 1114$	(0.08)	(0.08)	(0.11)	(0.09)	(0.06)	(0.05)	(0.03)	(0.08)	(0.12)	(0.12)

TABLE 20. Effect on consumption expenditures with different periods of recall. Food expenditures are for the past three days, non-durable non-food for the past month, and durables the past year. Asterisks: * $p < 0.01$, ** $p < 0.05$, * $p < 0.10$.

Class	Outcome	β^{2014}_{UPG}	β^{2015}_{UPG}	β^{2014}_{UCT}	β^{2015}_{UCT}	2014	2015	Baseline Baseline	Baseline missing	$\beta^{2014}_{UPG} - \beta^{2015}_{UCT}$	$\beta^{2015}_{UPG} - \beta^{2015}_{UCT}$
Values (SSP)	Food	18.41*	1.82	−3.80	14.18	73.52*	103.00*	0.06	15.72**	4.23	−12.36
	$N = 1306$	(4.83)	(6.29)	(5.53)	(8.93)	(4.16)	(4.86)	(0.04)	(6.60)	(10.15)	(10.92)
	Monthly	59.23**	34.76	32.96	69.81	259.41*	294.59*	−0.05	−13.31	−10.58	−35.06
	$N = 1306$	(29.19)	(30.43)	(43.39)	(43.90)	(19.35)	(20.50)	(0.11)	(31.11)	(52.72)	(53.42)
	Yearly	435.43**	−8.48	−170.68	−48.24	808.30*	1022.19*	0.04	17.33	483.67	39.77
	$N = 1306$	(198.13)	(161.99)	(129.71)	(223.35)	(93.87)	(117.22)	(0.04)	(152.85)	(298.56)	(275.91)
Nonzero	Food	0.01	0.00	−0.01	0.00	1.00*	1.00*	−0.01**	−0.00	0.00	0.00
	$N = 1306$	(0.00)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.00)	(0.00)	(0.01)	(0.01)
	Monthly	−0.01	0.00	−0.03*	0.01*	0.99*	0.98*	0.01	0.00	−0.01**	−0.01
	$N = 1306$	(0.00)	(0.01)	(0.02)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
	Yearly	0.02	0.01	0.00	−0.01	0.97*	0.96*	−0.01	−0.00	0.02	0.02
	$N = 1306$	(0.01)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.03)	(0.03)	(0.03)
Log Values	Food	0.21*	0.03	0.00	0.14*	4.05*	4.32*	0.03	0.26**	0.07	−0.12
	$N = 1297$	(0.06)	(0.06)	(0.06)	(0.08)	(0.11)	(0.11)	(0.02)	(0.12)	(0.10)	(0.10)
	Monthly	0.33*	0.12*	0.12	0.18*	5.02*	5.28*	0.01	0.06	0.15	−0.06
	$N = 1296$	(0.08)	(0.07)	(0.11)	(0.10)	(0.08)	(0.08)	(0.02)	(0.10)	(0.13)	(0.12)
	Yearly	0.13	−0.03	−0.10	0.09	6.04*	6.06*	0.01	0.20	0.04	−0.12
	$N = 1260$	(0.12)	(0.13)	(0.13)	(0.14)	(0.14)	(0.15)	(0.02)	(0.17)	(0.19)	(0.20)

TABLE 21. Effects of programs on different measures of food insecurity. Asterisks: * $p < 0.01$, ** $p < 0.05$, * $p < 0.10$.

Outcome	2014	2015	Baseline missing	Baseline value	β_{UCT}^{2014}	β_{UCT}^{2015}	β_{UPG}^{2014}	β_{UPG}^{2015}	$\beta_{UPG}^{2014} - \beta_{UCT}^{2015}$	$\beta_{UPG}^{2015} - \beta_{UCT}^{2015}$
Fewer Meals	0.72^{*}	0.73^{*}	0.00	0.01	-0.01	0.04	-0.04	0.06^{*}	-0.07	0.03
$N = 1135$	(0.05)	(0.04)	(0.00)	(0.04)	(0.05)	(0.05)	(0.04)	(0.04)	(0.07)	(0.06)
Limited portions	0.66^{*}	0.79^{*}	0.00	0.03	0.04	-0.01	0.07	-0.01	0.07	-0.01
$N = 1126$	(0.04)	(0.03)	(0.00)	(0.03)	(0.05)	(0.05)	(0.04)	(0.04)	(0.06)	(0.06)
No food in house	0.47^{*}	0.56^{*}	0.00	0.05	0.01	0.05	-0.08^{*}	0.03	-0.14^{*}	-0.03
$N = 1128$	(0.04)	(0.04)	(0.00)	(0.04)	(0.06)	(0.06)	(0.05)	(0.04)	(0.07)	(0.07)
Went hungry	0.37^{*}	0.43^{*}	0.00	0.06^{*}	-0.02	0.05	-0.06	0.08^{*}	-0.11	0.03
$N = 1137$	(0.04)	(0.04)	(0.00)	(0.03)	(0.06)	(0.06)	(0.05)	(0.05)	(0.07)	(0.07)
Whole day without eating	0.37^{*}	0.46^{*}	0.00	0.01	-0.02	-0.02	-0.02	0.01	-0.00	0.03
$N = 1097$	(0.04)	(0.04)	(0.00)	(0.03)	(0.06)	(0.06)	(0.05)	(0.05)	(0.08)	(0.08)
Worried	0.76^{*}	0.92^{*}	0.00	-0.03	0.05	-0.01	0.05	-0.02	0.07	-0.01
$N = 1123$	(0.04)	(0.04)	(0.00)	(0.03)	(0.05)	(0.04)	(0.04)	(0.03)	(0.06)	(0.05)
z-score	-0.13^{**}	0.02	—	0.10^{*}	0.28^{*}	-0.12	0.27^{*}	0.01	0.39^{*}	0.14
$N = 1500$	(0.05)	(0.05)		(0.03)	(0.10)	(0.11)	(0.08)	(0.08)	(0.14)	(0.14)