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Effects of Financial Incentives on Saving Outcomes and Material Well-Being: Evidence From a Randomized Controlled Trial in Uganda

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Abstract

The use of savings products to promote financial inclusion has increasingly become a policy priority across sub-Saharan Africa, yet little is known about how families respond to varying levels of savings incentives and whether the promotion of incentivized savings in low-resource settings may encourage households to restrict expenditures on basic needs. Using data from a randomized

controlled trial in Uganda, we examine: 1) whether low-income households enrolled in an economic-empowerment intervention consisting of matched savings, workshops, and mentorship reduced spending on basic needs and 2) how varied levels of matching contributions affected household savings and consumption behavior. We compared primary school-attending AIDS-affected children (N = 1,383) randomized to a control condition with two intervention arms with differing savings-match incentives: 1:1 (Bridges) and 1:2 (Bridges PLUS). We found that: 1) 24 months post-intervention initiation, children in Bridges and Bridges PLUS were more likely to have accumulated savings than children in the control condition; 2) higher match incentives (Bridges PLUS) led to higher deposit frequency but not higher savings in the bank; 3) intervention participation did not result in material hardship; and 4) in both intervention arms, participating families were more likely to start a family business and diversify their assets.

INTRODUCTION

Microsavings products—defined as small-deposit accounts tailored for low-income individuals and families—have shown great promise in increasing household-level investments, expenditures, and long-term asset accumulation, particularly among marginalized communities and individuals (including racial minorities and immigrants) in Western industrialized countries (Friedline, 2014; Huang et al., 2013; Sherraden, 2005) and increasingly in lower- and middle-income countries (LMICs) (Ashraf et al., 2003; Basargekar, 2015; Dupas & Robinson, 2009; Karimli & Ssewamala, 2014; Van Rooyen, Stewart, & De Wet, 2012). As a branch of microfinance, microsavings programs range in design, size, and structure. Examples of microsavings programs include Rotating Savings and Credit Associations, Savings and Credit Cooperatives, and more formalized mobile money or banking institutions. Options within formalized savings programs can include standard deposit accounts or savings products that offer incentives, such as matching contributions, in return for conditional withdrawals that direct the use of savings toward education, health care, housing, or small-business development. Prior studies have shown that incentivized or conditional savings products are more effective in promoting saving habits than simply offering the opportunity to open a savings account (Brune et al., 2011; Ssewamala et al., 2016). However, we know little about whether offering higher incentives for saving results in better savings outcomes, especially in low-resource communities such as those in sub-Saharan Africa, or whether incentivizing saving among low-income households would constrain spending on basic necessities such as clothing and food. This paper aims to address these crucial gaps in the literature by assessing the effects of a matched-savings program coupled with financial education workshops and mentorship on savings outcomes and material well-being for AIDS-affected children in rural Uganda.

MICROSAVINGS

Globally, microcredit programs, in which small loans are offered to borrowers, have received the largest share of attention from academics, with the effects of microsavings largely understudied (Karlan, Ratan, & Zinman, 2014). Despite the popularity of microcredit, there is growing evidence that such programs may have negative impacts over time, particularly if client business endeavors fail and debt burdens grow (Van Rooyen et al., 2012). This may

have ramifications for the individuals and families involved, including a direct impact on their health functioning, educational outcomes, and overall child well-being (Van Rooyen et al., 2012). However, the limited research that exists on microsavings suggests that, if given the opportunity, poor individuals and households can and do save, yielding positive effects on financial outcomes such as asset accumulation (Basargekar, 2015; Han, Grinstein-Weiss, & Sherraden, 2009; Ssewamala & Sherraden, 2004) and adoption of regular savings behavior (Karimli, Ssewamala, & Neilands, 2014; Nam et al., 2013) as well as consumption smoothing and supporting productive investments in both human and financial capital (Van Rooyen et al., 2012). Broader social outcomes have also been documented including increased female decisionmaking power within the household (Ashraf, Karlan, & Yin, 2010).

In Uganda, the geographical focus of our study, Child Development Accounts (CDAs) in particular, along with financial education workshops and mentorship, have been associated with improved school performance (Curley, Ssewamala, & Han, 2010; Ssewamala et al., 2016; Ssewamala & Ismayilova, 2009), reductions in sexual risk-taking behavior (Ssewamala, Han et al., 2010), decreases in depressive symptomology (Ssewamala et al., 2012; Wang, Ssewamala, & Han, 2014), and improved mental health functioning among adolescents affected by AIDS (Han, Ssewamala, & Wang, 2013; Ssewamala, Han, & Neilands, 2009). In the United States, CDAs have demonstrated positive effects on children's socioemotional development (Huang et al., 2014), students' math scores (Elliot, Jung, & Friedline, 2010), and college enrollment and completion (Elliot, Song, & Nam, 2013).

The findings highlighted in these studies are consistent with the literature on asset theory, which posits that financial assets have the potential to not only impact economic stability for individuals and households but also to yield important developmental, psychological, and social benefits (Sherraden, 1991; Yadama & Sherraden, 1996). Helping individuals and households with limited financial and economic resources or opportunities acquire and accumulate long-term productive assets is increasingly viewed as a critical factor in reducing poverty, positively impacting attitudes and behaviors, and improving psychosocial functioning and stability (Rutherford, 2000; Shobe & Page-Adams, 2001; Ssewamala, Han et al., 2010; Zhan & Sherraden, 2003). Increased assets have been associated with optimistic thinking as well as feelings of safety (Garmezy, 1985) and security (Garmezy, 1994). In addition, accumulated savings have been shown to help families meet future consumption needs and better cope with economic shocks (Romero & Nagarajan, 2011).

SITUATING SAVINGS WITHIN A BEHAVIORAL ECONOMICS CONTEXT

Although the benefits of asset accumulation have been well documented, effective strategies for improving savings outcomes have long been debated in the behavioral economics literature, which offers nuanced explanations for why individuals fail to adopt routine savings behaviors. For instance, individuals are not only constrained externally, through lack of income and opportunities for asset accumulation, but also internally, through the psychological effects of economic insecurity (Bertrand et al., 2004). A persistent lack of income or financial assets to meet basic needs can exhaust one's cognitive ability to make

efficient economic decisions (Mani et al., 2013; Gennetian & Shafir, 2015). This fosters psychological adaptive behavior, such as myopia in savings and investment (Strulik, 2016), risk aversion and depression (Haushofer & Fehr, 2014), and diminished aspirations for educational or professional achievement (Dalton et al., 2016), which can then secondarily affect the attitudes and outcomes of members within a given household, including children (Dercon & Singh, 2013). These adaptive responses to economic stress can trigger long-term poverty and inequality (Genicot & Ray, 2017; Gennetian & Shafir, 2015). To overcome these barriers and accumulate assets, past studies have identified effective strategies in promoting savings behavior, such as automatic enrollment, goal setting, matching contributions, and commitment mechanisms, including conditional withdrawals (Madrian, 2012). The intervention evaluated in this paper adopted the latter two (i.e., matching contributions and commitment mechanisms).

Savings programs with commitment mechanisms often entail mental accounting methods, such as “labeling,” which segregates sums of money for specific goals, decreases fungibility, and thereby protects savings from the requests of friends or family (Ashraf et al., 2003; Dupas & Robinson, 2013). As cultural norms in sub-Saharan Africa may obligate individuals to give what is readily available (Mpiira et al., 2014; Platteau, 2014), the mental allocations of funds through labeling or more formalized savings commitment devices, such as timed deposits or conditional withdrawals, can decrease this sense of “availability” (Ashraf et al., 2003; Dupas & Robinson, 2013) and help foster routinized savings.

With respect to matching contributions, prior studies have demonstrated that programs incorporating incentives offer a more cost-effective way to improve savings outcomes for low-income individuals (Chetty, 2015), with financial incentives being the most powerful motivator in many contexts (Madrian, 2014). In the United States, studies have indicated that although matching one’s contribution increases savings plan participation and the amount of savings, increasing the monetary value of the financial incentive only has a small effect on savings amount (Madrian, 2012). Evidence of the impacts of financial incentives in low- and middle-income countries is limited. One of the few studies seeking to understand differential outcomes based on degree of savings incentives—conducted in rural Kenya—found that offering a higher interest rate for savers led to an increased likelihood of bank account utilization than lower interest rates (Schaner, 2013), suggesting that incentives may be important when seeking to promote access to formal financial institutions.

MICROSAVINGS AND MATERIAL WELL-BEING

Another key question in the microsavings literature is whether savers in low-resource contexts compromise their material well-being in order to free up resources to save. A field experiment conducted in Nepal found that eliminating monetary costs in order to save (e.g., opening, maintenance, or withdrawal fees) among low-income households led to an increase in total expenditures on meat, fish, and education and an increase in assets by 12 percentage points (Prina, 2015). Yet, limitations of the Nepal study include the fact that it did not investigate the impacts of savings incentives on consumption and lacks generalizability in the context of sub-Saharan Africa (Van Rooyen et al., 2012). Research attempting to address the consumption question in Kenya through a field experiment found that access to savings

increased market vendors' food expenditure by 13 percent and other private expenditure (e.g., meals in restaurants, sodas, alcohol, cigarettes, clothing, hairstyling, and entertainment) by 38 percent (Dupas & Robinson, 2009). Dupas and Robinson's (2009) study was limited by its small sample size ($n = 250$) and short timeframe of impact measurement (six months after the accounts were offered).

As of this writing, the only published study that has examined incentivized savings in relation to consumption patterns in sub-Saharan Africa found that families enrolled in a matched child savings account did not reduce assets as savings behavior increased, though the analysis was limited to tangible asset holdings such as livestock, gardens, and modes of transportation, which excludes other key measures of poverty, particularly those reflecting more immediate consumption, such as food security and clothing (Karimli et al., 2014). The effects of varying levels of savings incentives were unexamined. Overall, there is a dearth of research on the effectiveness of higher incentives as a strategy to promote saving in the context of sub-Saharan Africa. Also, it is not known whether, when offered incentives to save, low-income families reallocate existing financial resources to save or if they obtain new resources for depositing into their accounts. If routine savings behavior is perceived as difficult for many—including high-income families—one would be justified in arguing that it is even more difficult for poor and low-income families who face challenges meeting basic needs.

MICROSAVINGS IN THE UGANDAN CONTEXT

In Uganda, the focus of this paper, the 2014 report on the Status of Financial Inclusion indicates that 54 percent of Ugandans 18 years of age and older were being served by formal financial institutions, 31 percent were served by informal financial mechanisms, and 15 percent were fully excluded from the financial system (Bank of Uganda, 2014). The large majority of those excluded and participating in informal financial programs were in rural areas, in which over 80 percent of Uganda's population resides (InterMedia Uganda, 2014; World Bank, 2014). As the Government of Uganda aimed for 70 percent financial inclusion in the formal financial system by 2017 (Intermedia Uganda, 2014), great emphasis must be placed on providing access to rural populations and understanding the experiences of rural families as they adopt regular savings habits.

To meet such goals for financial inclusion, practitioners and policymakers must address the distinct constraints affecting low-income households as they attempt to save, namely transaction costs, mistrust of financial institutions, regulatory barriers, information gaps, social constraints, and behavioral biases (Ashraf, Karlan, & Yin, 2006; Karimli, Ssewamala, & Neilands, 2014; Karlan et al., 2014; Schreiner & Sherraden, 2007). In addition, more data are needed to understand how varying incentive amounts influence saving behavior and the consumption patterns of savers in low-resource contexts.

Our study seeks to understand the extent to which: 1) offering higher savings incentives in a low-resource country such as Uganda—where 68 percent of the population lives below the poverty line of \$2.50 per day (World Bank, 2014)—would be an effective strategy to promote savings; 2) participation in an incentivized savings program by low-income

Ugandan families may impact their material hardships, including the ability to meet basic needs; and 3) Ugandan families generate new resources (e.g., starting a small business) to meet immediate consumption needs while maintaining savings practices.

Indeed, gaining insight on these questions is important to inform the design of cost-effective savings products and to identify the potential risks and benefits of microsavings as an economic strengthening intervention in development contexts. If families deprive themselves of the consumption of basic needs in order to save, it is plausible that participation in microsavings programs may be detrimental to household members, particularly children. However, if families use alternative means to generate new resources for saving, then such programs may be beneficial not only for initiating saving behavior and promoting financial inclusion but also for fostering innovative and resourceful methods of income generation. Moreover, these questions are being addressed at a time when financial inclusion is increasingly becoming a policy priority for several governments in sub-Saharan Africa, as documented in Uganda's Vision 2040 (Republic of Uganda, 2007), Kenya's Vision 2030 (Republic of Kenya, 2007), Rwanda's Vision 2020 (Republic of Rwanda, 2000), South Africa's policy position (Republic of South Africa, 2011), and Nigeria's national financial-inclusion strategy (Republic of Nigeria, 2012).

To examine these questions, we use longitudinal data from three waves of an economic empowerment intervention that provide incentivized savings in the form of CDAs. The intervention, entitled *Bridges to the Future*, is funded by the National Institute of Child Health and Development (NICHD); it offers us an opportunity to address, in-depth, the questions highlighted above and to document potential implications for savings programs and policies targeted toward low-income families in low-resource settings.

THE *BRIDGES TO THE FUTURE* STUDY

The *Bridges to the Future* is an NICHD-supported study that recruited AIDS-affected children from 48 primary schools in southwest districts of Uganda. Specifically, the inclusion criteria for this study are the following: (1) an HIV/AIDS-orphaned child—defined as a child who lost one or both parent(s) to AIDS (based on self-report and school records); (2) in Grades 5 and 6 in primary school at baseline; (3) living within a family and not in an institution or orphanage.

Figure 1 illustrates a flow diagram following the Consolidated Standards of Reporting Trials (CONSORT) guidelines. At baseline, this study recruited 1,410 participants. During the first year of the study, 27 participants were found to have been included in error by their school administration. They were later identified by the research team as not meeting the inclusion criteria, so they were excluded from subsequent interviews. Thus, the final study sample on which this paper is based consisted of 1,383 participants from 48 primary schools.

Using a three-group cluster randomized controlled trial, the 48 schools included in the study were randomly assigned to three study arms, each with 16 schools. All children meeting the inclusion criteria from a particular school received the same intervention to reduce contamination. Of the 48 schools, 16 were randomly assigned the control condition ($n = 487$

students), 16 to the *Bridges* condition ($n = 396$ students), and the final 16 to the *Bridges PLUS* condition ($n = 500$ students).

All participants in the control condition as well as those in the two experimental arms, *Bridges* and *Bridges PLUS* (which are described more fully below), received bolstered standard of care (SOC) for school-going AIDS-orphaned children in the study area. This SOC included: school lunches, scholastic materials (textbooks and notebooks), and counseling (provided by priests in the community). In addition to the SOC described above, children in the intervention conditions, *Bridges* and *Bridges PLUS*, received the following intervention components: 1) workshops that focused on asset building, family microenterprise development, future planning, and how to protect oneself from risk. Children's caregiving families were invited and encouraged to participate in these workshops together with their children; 2) mentors to reinforce learning and build optimism; and 3) a Child Development Account (CDA), from which matched savings could be used for secondary education and microenterprise development. Because of the banking contractual laws in Uganda stating that a minor (i.e., a child below the age of 18) cannot enter into a binding contract, both the caregiver's and the child's names had to be included on the CDA, directly involving the caregivers in the saving process. No authorized withdrawals could be made without the child's approval and signature.

It is important to note that the only difference between the two treatment arms, *Bridges* and *Bridges PLUS*, was the level of financial incentive (or match rate) the participants received for saving. Whereas participants in the *Bridges* condition received a 1:1 match rate, meaning they received an equivalent of US\$1 for each US\$1 they deposited into their savings accounts, participants in the *Bridges PLUS* condition received a 1:2 match rate, meaning that for each US\$1 equivalent they deposited into their own account, they received an equivalent of US\$2. Participants in both intervention groups had a match cap (the highest amount beyond which no matching is given) of up to \$10 USD a month or an equivalent of \$240 USD over the two-year intervention period. The varying match rates were provided to establish whether offering higher matching contributions would be an effective strategy to promote savings and other observable developmental outcomes.¹ The differing rates were also included to observe the effects of a higher saving incentive on consumption patterns, including expenditures on basic family needs (such as food and clothing). The intervention was provided for 24 months. This study used data from three time points: baseline as well as 12 months and 24 months post-intervention initiation. Data were collected at a 12-month interval between 2012 and 2014 using repeated measures. Baseline assessments (Wave 1) occurred in 2012 with 12- and 24-month follow-up assessments occurring in 2013 and 2014, respectively. The 24-month interview was conducted after the intervention was completed.

¹This paper focuses on the effects of varied levels of savings incentives on savings outcomes and material wellbeing. In Ssewamala et al. (2018), the effectiveness and cost-effectiveness of savings incentives on child developmental outcomes were examined. These developmental outcomes include health, mental health, self-concept, self-efficacy, sexual health, and education.

METHODS

Data Collection

The study identified potential participants and recruited participating children with assistance from the children's schools and Masaka Diocese parish priests. Specifically, each parent with a child in Grades 5 and 6 was given a flyer that contained information on the study and an invitation to participate—should they meet the eligibility criteria. In addition, parish priests distributed flyers during church services and community visits to inform caregivers whose children may not yet have reported back to school. Caregivers who indicated interest were invited, together with their children, for an informational meeting with the research team. The research team provided study details to the potential participants during this information meeting. The research team obtained informed consent from the primary caregiver and the assent from the child before enrolling any child in the study. The study received ethics approval from Columbia University (Protocol #AAAK3852) and the Uganda National Council for Science and Technology (Protocol #IRB00011353). The study's protocol is registered in the clinicaltrials.gov database (ID#NCT01790373).

All interviews were conducted either at children's schools—when schools were not in session, availing the interview team with private space—or at children's homes in a private room. Each interview took between 60 and 70 minutes to administer. All interviewers were bilingual. They were fluent in English and Luganda, and assessments were administered in Luganda—the language spoken in the study area—though responses were recorded in English. All interviewers received highly structured and intensive interview training led by this study's principal investigator. All measures were translated from English to Luganda and then translated back from Luganda to English. Only measures that had been pretested and made culturally appropriate for the Ugandan context were used.

Measures

There are two main outcomes in this study: saving levels and material conditions, including material hardship and material resources. The savings information was derived from two sources: 1) children's self-report during the in-person interviews and; 2) formal bank administrative records. The self-reported savings information was taken from two questions in the survey. The first question was, "Do you currently have any money saved anywhere?" where *yes* is coded as 1 and *no* coded as 0; and the second was, "How much money do you currently have saved?" Using self-report information to examine savings and consumptions is common in other studies (Elliott et al., 2011; Karimli, 2014). Bank records provided information on whether the child opened a savings account, whether the child saved any money in the bank, the number of deposits, and how much the child saved.

Using participants' bank records, the amount of savings was calculated by subtracting any unauthorized withdrawals (also called unmatchable withdrawals) from total CDA deposits. Unauthorized withdrawals were defined as withdrawals made by the participants without the approval of the program and for purposes outside those targeted by the CDAs (e.g., paying for educational expenses or microenterprise development). If a participating family made an unauthorized withdrawal, the family had to forego the matching contribution on that amount.

Thus, the design was intended to create a disincentive for families from making unauthorized withdrawals. In calculating the savings amounts, we excluded unauthorized withdrawals but included authorized withdrawals for program-targeted purposes to capture the accumulated financial resources used for educational advancement or small business development. For information on both self-reported and administrative savings, the amount was not normally distributed, so we transformed the savings amount (in Ugandan Shillings [UGX]) by a natural log. We added 1 to all savings values before taking a natural log to address a specific issue, namely that some respondents had a savings value of zero (Vittinghoff et al., 2011).

Material conditions were captured by material hardship and material resources. Material hardship information was derived from in-person interviews, containing six dichotomous indicators: if a child only had two or fewer sets of clothes, had no blanket at home, had no shoes, did not eat meat or fish in the past week, had one meal or less per day in the past week, and did not have sugar for their tea in the past week. We further included two indicators on material resources: 1) the count of assets possessed by a household (ranging from means of transportation, livestock and poultry, to means of communication);² and 2) whether the family owned a small business/retail store/shop/kiosk. We believe that given the average age of the children recruited in the study, each one had enough knowledge to respond to questions such as numbers of meals per day or whether he or she sleeps under a blanket.

Analytical Approaches

This paper used three-level multilevel models to estimate the effects of the intervention on saving behaviors and material conditions. Multilevel models have the advantage of being statistically efficient in accounting for the clustering nature of data, where multiple individuals are nested within each school, and multiple observations across time are nested within each individual. Specifically, children from the same school are likely to be correlated with each other, and the repeated measures for each individual are likely to be not independent. Multilevel models allow us to estimate the school-level random intercepts, individual-level random intercepts, and the individual random slopes across survey time points.

In each model, we included study group status (*Bridges* and *Bridges PLUS*, with control group serving as the reference group), time dummy(ies), and their interactions. The interactions allowed us to identify the intervention effects accounting for any baseline differences in outcomes of interest across the three study arms before the intervention as well as accounting for changes in outcomes across time shared by the three arms. Continuous outcomes (e.g., the log of savings and asset index) were estimated using linear mixed models (LMMs) with the resulting regression coefficients estimating the mean change in the outcome per unit change in the predictor via the `-mixed-` command in Stata 14. Count outcomes (e.g., number of deposits) were estimated using a Poisson generalized linear

²Specifically, the 18-item asset index includes whether the household owns a house, land, a bicycle, a motorcycle/boda boda, a car, a television, a radio, a cell phone, a banana garden, a coffee garden, a sweet potato garden, a cassava garden, other gardens, cow(s), goat(s), pig(s), poultry, and any other animals.

mixed model (GLMM) via the Stata-mepoisson-command with the incidence rate ratio (IRR) reported to represent the factor change in the outcome per unit change in the predictor. Binary outcomes (e.g., opened a savings account) were estimated using a logistic GLMM via the Stata-melogit-command with the odds ratio reported to represent the change in odds of the outcome per unit change in the predictor. We modeled the covariance structure to be unstructured, which made the least assumptions regarding the covariance structure, and we estimated the cluster-adjusted robust standard errors with school ID treated as the clustering variable.

There was a modest 10 to 13 percent attrition across the three study arms: *Control* 12 percent, *Bridges* 13 percent, and *Bridges Plus* 10 percent attrition between baseline and 24 months post-intervention initiation. The attrition rate was not statistically different across the three study arms (see Appendix Table A2).³ The multilevel models used in this study accounted for missing data for the dependent variables under the relatively mild missing-at-random (MAR) assumption through maximum likelihood estimation. The independent variables (study group and time) were constructed based on the study design parameters and thus had no missing values. To better understand the sources of interaction effects, significant group-by-time interactions were further decomposed by comparing groups within each time point and time points within each group using the Stata postestimation command-margins-with a Sidak p -value adjustment for multiple comparisons. We interpreted the treatment effects based on these pairwise comparisons as they accurately unpack interactions for various types of variables (Jaccard, 2001). We focused on interpreting results that were statistically significant at the $p < 0.05$ level.

Statistical Power

In performing power analyses, our starting N was 1,383 participants with available data at all three waves of measurement (see Figure 1). With a starting sample of $N = 1,383$, two post-baseline repeated measurements, power = .80, and alpha = .05, we used formulas found in Diggle et al. (2002) to compute the minimum detectable standardized effect sizes for paired comparisons for: (a) the mean difference for a continuous outcome (d) and (b) the proportion reduction for a binary outcome (h) across groups over two post-baseline repeated measurements. A wide range of baseline proportions are possible for the various binary outcomes proposed in this study, so we estimated minimum detectable effect sizes for binary outcomes with low (10 percent), moderate (25 percent), and substantial baseline proportions (50 percent). The within-subject correlation r among the responses was also varied from a low value of .20 to a high value of .80. The effective sample size (ESS) was reduced by dividing the observed sample size (1,383) by the design effect (DEFF). The DEFF represents the degree of variance inflation attributable to clustering of cases within schools. We estimated the DEFF values from data collected in our previous studies in Uganda. The maximum obtained DEFF value was 2.0. We therefore conservatively set our expected

³We found children lost to attrition more likely to be older at baseline, female, having lived in the households for less years, and less likely to have parents as their primary caregivers. In sensitivity analyses, we control for these characteristics in our analytic models, and the results are very similar to our reported findings (see results from Model 2 in Appendix Tables A4 through A7). All appendices are available at the end of this article as it appears in JPAM online. Go to the publisher's website and use the search engine to locate the article at <http://onlinelibrary.wiley.com>.

DEFF to 2.0 for this study to account for school-level variance inflation, resulting in an effective total sample size of $ESS = 1,383/2 = 691$. Minimum detectable standardized effect sizes ranged from .20 to .25. Benchmarks are .20 for small effect sizes and .50 for medium effect sizes. Therefore, our results suggested that we could detect small to small-medium effects under a variety of analysis conditions.

RESULTS

Descriptive Characteristics

Table 1 reports the descriptive statistics of a range of baseline demographic characteristics across the three study arms. As indicated in Table 1, the average age of children in this study at baseline was 12.7, and there were slightly more girls (56 percent) than boys (44 percent). Children in the study report having lived in the current households for an average of 7.3 years. The average household size was 6.4 people, of which 3.2 were children. Twenty-one percent of children enrolled in the study were double orphans (lost both parents), and 60 percent were cared for by either their grandparents (37 percent) or other relatives (23 percent; e.g., uncle, aunt, sibling, cousin, etc.). The majority of caregivers for the children enrolled in the study were not employed in a formal sector.

Table 2 presents descriptive statistics of savings and material conditions across the three time points. Results indicate that, between baseline assessment and 24-month follow-up, the rates of having any savings for children receiving *Bridges* and *Bridges PLUS* more than doubled from 30 and 34 percent to 62 and 75 percent compared to those of their counterparts in the control condition, whose saving rates stagnated at around 28 to 30 percent. The first two intervention years saw the biggest reported increase in savings (by an average of UGX 34,960; 1 USD = 2,682.06 UGX in 2012) for children in the *Bridges PLUS* arm (the 1:2 match rate group), followed by *Bridges* (the 1:1 match rate group) by an average of UGX 29,520. During the same period, children in the control condition reported a savings increase of UGX 5,253. Analysis of the savings data from the financial institutions holding the children's accounts indicated that 82 percent of children in the *Bridges* arm and 90 percent of children in the *Bridges PLUS* arm opened up savings accounts when offered the opportunity. These high percentages signal that, when given the opportunity, families in low-resource communities will interact with financial institutions. Among those who opened an account, 58 to 67 percent made at least one deposit in the bank account. The average amount of monthly savings was UGX 2,025 to 2,076 (in nominal terms) during the first intervention year and UGX 263 to 1,395 in the second intervention year.

To examine whether children in the three groups differed across the 18 characteristics at baseline (including demographic characteristics in Table 1 and outcome measures available at baseline in panel 2 in Table 2),⁴ we employed a multilevel model for each characteristic and used group-membership variables to predict that characteristic. In each multilevel

⁴In Appendix Table A3, we further tested the relationship between school characteristics and the three study groups. We found that the schools do not differ significantly in almost all characteristics, including district, nearest town, distance to the main road, enrollment, and educational performance. The schools only differ in terms of distance to the nearest town. All included schools are public primary schools founded by missionaries of the Catholic faith, but they have since been run by the government of Uganda, hence the term "church founded, but government supported." That is true for 97 percent of public schools in Uganda. Although we do not have

model, we included school-level random intercepts to account for clustering at the school level. We reported the test statistic and p -value from the Wald test after each model testing whether coefficients for the group membership are jointly equal to zero. We present results from these tests in Table 1 (for all demographic characteristics) and in panel 2 of Table 2 (for outcome measures available at baseline). Among the 18 characteristics at baseline, we found that children in the three groups were only statistically significantly different in two characteristics, namely: Children in the control group were more likely to be double orphans and to have a primary caregiver who is not a parent. We conducted sensitivity analyses controlling for these two characteristics in our analytical model. The results are presented in Model 2 in Appendix Tables A4 through A7.⁵ The results are very similar to our reported main findings.

With regard to material conditions, although children across the three study arms reported similar conditions at baseline, by 24 months post-intervention initiation, children in the two treatment arms reported better material conditions than their counterparts in the control group. Specifically, children in the two treatment arms *Bridges* and *Bridges PLUS* were less likely to report being deprived of clothing, shoes, blankets, and sugar for tea; moreover, their families were more likely to own a small business.

Treatment Effects on Savings Behaviors

Next, we used multilevel regressions to account for school-level and individual-level clustering and investigated treatment effects. In Tables 3 and 4, we first examined the extent to which the intervention promotes savings. This offered a context for understanding the degree to which families made “sacrifices” or stretched their resources to save. Table 3 shows multilevel regression results from children’s self-reported savings. Although children across the three study arms did not differ at baseline in reported saving habits and total amount of savings, there were reported differences in regard to saving habits and level of savings at 12- and 24-month follow-ups between children in the control condition and their counterparts in the treatment conditions. Specifically, children in the treatment conditions (*Bridges* and *Bridges PLUS*) had statistically significant higher odds of having money saved somewhere (an indication of saving habits) and having higher savings levels compared to children in the control condition. Using the `-margins-command` in Stata, we further tested whether the saving patterns among *Bridges* (1:1 match group) and *Bridges PLUS* (1:2 match group) were the same. We found that children receiving a larger savings incentive (*Bridges PLUS*) had statistically significant higher odds of reporting savings (odds ratio [OR] = 2.56, 95 percent Confidence Interval [CI] = 1.09, 6.03) and had higher levels of savings ($\beta=1.37$, 95 percent CI = 0.06, 2.68) than children in the *Bridges* condition at the 24-month follow-up. Furthermore, when we examined changes over time for each group, *Bridges* children were observed to experience significant changes in the odds of having savings from baseline to 12 months post-intervention initiation. The change between 12 and 24 months post-

information on income levels and poverty rates at the school level, the study area is poor across the board. The distance to the main road and the district/town would also be indicators of such characteristics. We accounted for school-level differences using the multilevel models. All appendices are available at the end of this article as it appears in JPAM online. Go to the publisher’s website and use the search engine to locate the article at <http://onlinelibrary.wiley.com>.

⁵All appendices are available at the end of this article as it appears in JPAM online. Go to the publisher’s website and use the search engine to locate the article at <http://onlinelibrary.wiley.com>.

intervention initiation was not statistically significant. Meanwhile, *Bridges PLUS* children experienced increased odds of saving between baseline and 12 months and between 12 and 24 months.

In Table 4, we used administrative savings data from the bank to further examine the effects of a higher savings incentive on savings outcomes. We restricted this analysis to children in the two treatment arms: *Bridges* and *Bridges PLUS*. We excluded children in the control condition because they were not offered the opportunity to open a bank account; hence, there are no verifiable savings data from the bank for this group of children. We, however, included *Bridges* and *Bridges PLUS* children who were offered the opportunity to open a CDA but who did not do so. Their savings outcomes were coded as zero (meaning they did not have verifiable savings in the bank). Given that the take-up of account opening was not random, including children who did not open a savings account in the analysis allowed us to report estimates reflecting intent-to-treat effects.

Results in Table 4 indicate that although offering higher savings incentives in the forms of a financial match (*Bridges PLUS*) on average increased children's odds to open a savings account at the bank (OR = 1.80; 95 percent CI = 0.98, 3.32) or to make any deposit (first intervention year: OR = 2.77; 95 percent CI = 0.84, 9.13; second intervention year: OR = 3.13; 95 percent CI = 0.89, 11.04) when compared to the *Bridges* arm, the differences were not statistically significant at the $p < 0.05$ level. With respect to the number of deposits, children receiving higher incentives (*Bridges PLUS*) made more deposits (indicating higher deposit frequency) than children in the *Bridges* arm (incidence rate ratio [IRR] = 2.07; 95 percent CI = 1.11, 3.87) during the first intervention year, but this difference in deposit frequency between *Bridges* and *Bridges PLUS* children was not statistically significant during the second intervention year (IRR = 2.08; 95 percent CI = 0.65, 6.71). However, despite a higher deposit frequency by *Bridges PLUS* children in the first intervention year, the actual total amounts deposited by both *Bridges* and *Bridges PLUS* children were similar in both intervention years (first intervention year: $\beta = 0.92$; 95 percent CI = -0.31, 2.16; second intervention year: $\beta = 0.14$; 95 percent CI = -0.60, 0.87). Because *Bridges PLUS* children were, by design, offered a higher match rate, they had marginally higher total savings (when one adds both the net savings and matched savings) than *Bridges* children during the first intervention year ($\beta = 1.25$; 95 percent CI = -0.11, 2.61; $p < 0.10$), and the difference was not statistically significant during the second intervention year ($\beta = 0.21$; 95 percent CI = -0.60, 1.02). In sum, based on administrative bank data, we found that 1) receiving a higher savings incentive (*Bridges PLUS*) only led to a higher frequency of deposits relative to receiving a lower savings incentive (*Bridges*) during the first intervention year, but the deposit frequency did not differ during the second intervention year; and 2) the levels of incentives did not affect the amount of deposits in the bank account in either intervention year.

It is also worth noting that regardless of the treatment arms, deposit frequency or the amount of savings decreased over time. Specifically, deposit frequency and actual deposit amounts were higher in the first intervention year than in the second intervention year. These observed trends could be attributed to several reasons: 1) a reflection of initial excitement by

children and families in their first year of having a savings account; 2) waning interest or capacity to save over time; 3) a lack of reminders from program implementers.

In supplementary analyses, we restricted the analysis to children in the two treatment arms (*Bridges* and *Bridges PLUS*) who opened a savings account to examine their savings patterns (see Appendix Table A1).⁶ As savings information is only available post-intervention initiation (account opening was a part of the intervention), our reference time point is the first intervention year (from baseline to 12-month follow-up) instead of baseline.

Determinants of Savings Behaviors

To identify the demographic characteristics associated with account utilization behaviors, we conducted additional analyses among children in the two treatment arms (*Bridges* and *Bridges PLUS*); the results are presented in Table 5. In terms of the determinants for “never opened an account,” we found that each additional year of age was associated with 39 percent lower odds of opening an account (OR = 1.39; 95 percent CI = 1.17, 1.63). For children who opened an account, the child–caregiver relationship seemed to matter in regard to account utilization. Specifically, children whose primary caregiver was a relative other than a biological parent or a grandparent had 84 percent higher odds of having lower account utilization rates (measured by making two or fewer deposits over the course of two years) compared to their counterparts cared for by surviving biological parents (OR = 1.84; 95 percent CI = 1.36, 2.50).

With respect to determinants of higher account utilization (measured by making at least two deposits during the second intervention year, during which time only 19 percent of children deposited any money), children who had lived with their current caregiving families longer reported higher account-utilization rates. Lastly, in terms of determinants of savings amount, children who had lived with their current caregiving families longer reported higher savings, and living in a larger household was associated with lower levels of savings.

Treatment Effects on Material Conditions

After examining the determinants of savings, we further investigate how saving itself—which entails foregoing immediate consumption—may impact children’s material well-being (see Table 6). In summary, the intervention did not result in material hardships; instead, several measures of material well-being improved. Below, we first report the overall patterns of outcomes if a particular outcome shows any statistically significant group by time interaction (at the $p < 0.05$ level), and then we specifically present some results from pairwise comparisons that were statistically significant (at the $p < 0.05$ level) to delineate the significant group by time interaction effects. In terms of clothing, we found evidence that at the 12- and 24-month follow-ups, children in treatment groups, on average, had lower odds of having fewer clothes or lacking a blanket at home. In other words, children in the treatment arms reported having more sets of clothes and were more likely to have a blanket than their counterparts in the control condition. Specifically, when conducting pairwise

⁶All appendices are available at the end of this article as it appears in JPAM online. Go to the publisher’s website and use the search engine to locate the article at <http://onlinelibrary.wiley.com>.

comparisons across three study arms at each time point using the `-margins-command` in Stata, we found that *Bridges PLUS* children had significantly lower odds of having only a few sets of clothes at both the 12-month (OR = 0.49, 95 percent CI = 0.24, 0.97) and 24-month follow-ups (OR = 0.36; 95 percent CI = 0.15, 0.85) compared to children in the control group, while *Bridges* children had significantly lower odds of having no blanket at both the 12-month (OR = 0.33; 95 percent CI = 0.12, 0.89) and 24-month follow-ups (OR = 0.19; 95 percent CI = 0.06, 0.64) compared to children in the control group. The intervention did not change the odds of having shoes. In terms of food consumption, *Bridges* children had lower odds of reporting having only one meal or less per day at the 24-month follow-up. In other words, *Bridges* children had higher odds of having more than one meal per day. The intervention did not seem to impact children's odds of having meat/fish or sugar for tea.

With respect to material resources, results showed evidence that the intervention increased the odds of owning a small business and the levels of asset holding. Specifically, pairwise comparisons at each time point suggested that families of both *Bridges* and *Bridges PLUS* children had significantly higher odds of owning a small business at the 24-month follow-up (for *Bridges*: OR = 2.28; 95 percent CI = 1.05, 4.95; for *Bridges PLUS*: OR = 2.95; 95 percent CI = 1.38, 6.29) than children in the control group.⁷ Furthermore, among families of *Bridges PLUS* children, although their odds of owning a small business did not differ from baseline to the 12-month follow-up, the odds increased significantly between the 12- and 24-month follow-ups (OR = 1.86; 95 percent CI = 1.21, 2.86). In addition, we did not find that engaging in savings crowded out nonmonetary assets or constrained poor families' access to resources. Instead, we found that both treatment arms (*Bridges* and *Bridges PLUS*) reported a higher increase in their levels of asset possession from baseline to 12 months than the average increase among participants in the control group.

To examine the mechanisms through which the intervention increased the odds of small business development or the levels of asset holding at the 24-month follow-up, we tested moderation effects of three potential moderators at the 12-month follow-up: (1) savings amount, (2) children's attendance rates at workshops and mentorship (mean = 0.61; standard deviation [SD] = 0.33), and (3) children and their caregivers' attendance rates at workshops for family microenterprise development (mean = 0.64; SD = 0.32). No significant moderation effects were identified in this analysis.

CONCLUSIONS

In sum, when children and families in both intervention arms were offered opportunities to open incentivized savings accounts at formal financial institutions and provided supportive workshops and mentorship as complementary programmatic components, participants were subsequently more likely to report having money saved somewhere. In fact, their reported amount of savings at 12- and 24-month follow-up interviews were higher than those in the control group who were not offered the opportunity to open a savings account. While we

⁷Further analyses on the effects of interventions on household ownership of gardens or livestock show that the interventions do not change the odds of household ownership of goats or pigs or ownership of banana, sweet potato, cassava, or coffee gardens. This suggests that the newly developed small businesses may be in areas beyond these realms or that they have not generated measurable outcomes.

found that offering a 1:2 match rate (*Bridges PLUS*) as opposed to a 1:1 match rate (*Bridges*) led to a higher likelihood and amount of self-reported saving (during both intervention years) and increased deposit frequency based on bank records (during the first intervention year), the incentive did not significantly increase the amount of savings based on bank records (in absolute terms). Concomitant with the increase in likelihood of saving among children in the intervention groups, there is no evidence suggesting that families sacrifice the consumption of basic needs to save nor do they give up or disinvest from existing assets. Specifically, families with children in intervention groups showed increased levels of asset holding over the two intervention years, a trend that was not observed among families with children in the control group. In addition, there are indications that households where children in the intervention arms resided were more likely to initiate small businesses, which may open new sources of income for asset accumulation in the long term.

Our study has limitations that have to be taken into account. First, children and families in both treatment arms received a bundle of services, combining a savings account (CDA) with financial incentives (1:1 or 1:2 match rates), mentorship, and workshops. Thus, we were not able to separate the effects of CDAs from those of other intervention components. However, since the two treatment arms only differed in their financial incentives to save, we can distinguish the effects of varying savings incentives. Second, our examination was limited by available measures. For example, savings information in this study was obtained through bank statements and self-report by children. Children may not be aware of all the monetary resources available to them (Karimli et al., 2014), and their families may not save money for the children in only one bank account. In other words, we were likely only capturing the financial resources, including savings, that were known to the children or saved in the bank account associated with the program. In addition, it would have been ideal to have had information on material resources covering the entire spectrum of a child's life (e.g., medical care, nutritional intake). However, we can only answer our research questions with available data. Third, the intervention targeted AIDS-affected children, defined in our study as those who had lost one or both parents to AIDS, a subgroup of greater economic vulnerability than nonorphans; therefore, the effects reported in this study are not generalizable to the broader child population. However, savings performance demonstrated among this resource-constrained population can only be lower-bound estimates when compared to a situation in which the same intervention would be delivered to children with more resources at their disposal. Also, if the intervention was found not to contribute to material hardship among this vulnerable group, it would be counterintuitive to think that the same intervention would contribute to material hardship among children in more secure economic conditions.

Consistent with prior studies, we found that offering low-income families matching incentives increased the likelihood of opening a savings account and reporting higher savings amounts compared to participants in the control arm (Schaner, 2013). One key finding is that once given incentives, the degree of incentives does not significantly and differentially affect the amount of savings based on the bank administrative data. Namely, a 1:2 match rate does not encourage families to save more than a 1:1 match rate (before factoring in the match provided by the intervention). The lack of effects of incentives on savings may be explained by the fact that a 1:1 match rate is high enough, and low-income households can only squeeze so much out of their present budget to save. It could also be

due to the fact that the bundled intervention of CDAs—which includes mentorship and workshops—is the key contributor to the observed savings outcomes. That would mean that the marginal match rate, in relative terms, does not have as much behavioral impact, a finding consistent with studies in the U.S. context (Madrian, 2012). In addition, in the implementation process, it is unknown, given the match rate, for how long the financial incentive continues to be an influence for participants following the initiation of the intervention. Is it three months, six months, or 12 months? Could the use of reminders have been helpful in maintaining or promoting saving among participants? This is a question that future research may need to address. What we know from work in the United States on the American Dream Demonstration is that reminders do matter with respect to influencing and maintaining savings (Sherraden & McBride, 2010).

Furthermore, we found that savings in the second year declined significantly for children in both intervention groups (i.e., regardless of the match rate offered). This declining trend in savings has also been observed in prior studies in East Africa. Dupas et al. (2014) randomly offered subsidized savings accounts to unbanked individuals in western Kenya and found that although 62 percent in the treatment group opened an account, only 18 percent of the treatment group made two or more deposits within the first year after opening the account. Another study in Kenya found that only 7 percent of participants who were randomly assigned to receive subsidies used their account in the third year after account opening (Schaner, 2013). Although microsavings programs have consistently shown to increase access to formal financial institutions, the low utilization rate over time is also a consistent problem across programs. As such, this study further investigated determinants of low account utilization. We found that children who did not live with either of their biological parents or who had lived in their current households for fewer years were making fewer deposits. We also found evidence suggesting that older children were less likely to open a savings account, suggesting the importance of early intervention to promote saving behaviors. Conversely, having lived in a household for more years was associated with greater savings accumulation. These findings can assist practitioners to more effectively identify vulnerable groups in microsavings programs and build in program features that help eliminate barriers to sustained savings behavior.

Another key finding in this study is that families did not decrease their consumption of basic and necessary goods when offered an opportunity to save. Orphaned children and their caregiving families did not experience more material hardships when savings opportunities were available. Furthermore, there are indications that children in the treatment groups were less likely to lack a blanket to use, and they were also less likely to be deprived of food. Meanwhile, the intervention contributed to families' accumulation of tangible assets. These findings corroborate prior studies' findings on savings in relation to increased or unchanged expenditure and tangible assets (Dupas & Robinson, 2009; Karimli et al., 2014; Prina, 2015). This study offers new evidence that incentivized savings, even at a 100 percent or 200 percent match rate, did not harm, but rather, in many cases, improved the material well-being of participants. This evidence is crucial as national governments and development actors across sub-Saharan Africa promote financial inclusion as a key development strategy.

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APPENDIX

Table A1

Multilevel regressions for children's savings.

Outcomes	Saved any money	Number of deposits	Log(monthly savings)	Log(monthly savings + matched savings)
Models	Logistic Odds Ratio [95% CI]	Poisson IRR [95% CI]	Linear Beta-coefficient [95% CI]	Linear Beta-coefficient [95% CI]
Group (Ref: Bridges)				
Bridges PLUS (Bridges ⁺)	2.01 [0.64, 6.34]	1.91 [1.02, 3.59] [*]	0.72 [−0.67, 2.12]	1.06 [−0.47, 2.59]
Time (Ref: 1st Intervention Year)				
2nd Year	0.02 [0.01, 0.06] ^{***}	0.07 [0.03, 0.16] ^{***}	−3.12 [−4.07, −2.18] ^{***}	−3.42 [−4.46, −2.38] ^{***}
Group X Time				
Bridges PLUS X 2nd Year	1.39 [0.67, 2.89]	0.94 [0.45, 1.98]	−0.62 [−1.76, 0.51]	−0.88 [−2.14, 0.37]
Constant	1.46 [0.64, 3.32]	0.71 [0.38, 1.33]	4.19 [3.02, 5.37] ^{***}	4.57 [3.30, 5.84] ^{***}
Variance of School Random Intercepts	2.27 [1.16, 4.41]	0.51 [0.18, 1.43]	1.36 [0.75, 2.48]	1.62 [0.90, 2.93]
Variance of Child Random Slopes (time)	0.84 [0.05, 15.30]	2.12 [1.45, 3.11]	6.68 [2.85, 15.66]	8.43 [1.77, 40.15]
Variance of Child Random Intercepts	0.21 [0.00, 2004.63]	0.90 [0.33, 2.42]	24.63 [13.79, 43.99]	31.03 [10.00, 96.23]
Covariance of Child Slopes & Intercepts	0.34 [−0.80, 1.49]	−1.19 [−1.98, −0.39]	−12.08 [−20.21, −3.94]	−15.27 [−35.32, 4.78]
Variance of Residuals			4.48 [2.26, 8.88]	5.56 [1.56, 19.88]
Observations	1548	1548	1548	1548
N	774	774	774	774
Pairwise comparisons				
1st Year: Bridges ⁺ vs. Bridges	2.00 [0.60, 6.67]	1.91 [1.02, 3.59] [*]	0.72 [−0.67, 2.12]	1.06 [−0.47, 2.59]
2nd Year: Bridges ⁺ vs. Bridges	2.80 [0.80, 9.80]	1.80 [0.58, 5.55]	0.10 [−0.71, 0.90]	0.18 [−0.71, 1.06]
Bridges: 1st Year vs. 2nd Year	0.02 [0.01, 0.06] ^{***}	0.07 [0.03, 0.16] ^{***}	−3.12 [−4.07, −2.18] ^{***}	−3.42 [−4.46, −2.38] ^{***}
Bridges ⁺ : 1st Year vs. 2nd Year	0.03 [0.01, 0.07] ^{***}	0.06 [0.04, 0.11] ^{***}	−3.75 [−4.37, −3.13] ^{***}	−4.30 [−5.01, −3.59] ^{***}

Notes:

⁺ p<0.10;

*
p<0.05;
**
p<0.01;

p<0.001.

The sample of analysis (treated sample) is restricted to children who opened a bank account in the two intervention arms. The outcome data in this analysis were obtained from children's bank statements.

Table A2

Descriptive statistics on characteristics of attritted sample.

	Retained respondent (n=1204)		Attritted respondents (n=179)		Difference
	Mean / %	SD	Mean / %	SD	
Group Status:					
Control	86.24		13.76		
Bridges	86.36		13.64		
Bridges PLUS	88.40		11.60		
Age	12.63	1.26	13.03	1.21	**
Female	0.54		0.67		**
Household size	6.36	2.72	6.29	3.22	
Number of children	3.18	2.10	3.21	2.80	
Years living in the households	7.41	4.46	6.23	4.39	**
Double orphan	0.21		0.23		
Primary caregiver					
Parents	88.59		11.41		**
Grandparents	86.08		13.92		
Other relatives	85.90		14.10		
Caregiver: employed	0.29		0.34		
Savings					
Have savings	0.31		0.27		
Amount of savings	2191.60	6367.16	1941.34	5784.10	
Material hardships					
Few sets of clothes (2 or less)	0.14		0.13		
No blanket	0.32		0.36		
No shoes	0.29		0.31		
No meat/fish in past week	0.40		0.32		+
Have one meal or less per day	0.19		0.18		
No sugar for tea last week	0.22		0.25		
Material resources					
Own small business	0.35		0.36		
Asset index (range 1–18)	9.30	3.06	9.11	3.12	

Notes:

+
p<0.10;
*
p<0.05;
**
p<0.01.

To examine whether children who remained in the survey and those who attritted are different in terms of their demographic and outcome characteristics, we employed a multilevel model for each characteristic and used attrition status to predict that characteristic. In this multilevel model, we included school-level random intercepts to account for clustering at the school level. We report the *p*-value from the attrition status coefficient in each model/for each characteristic.

Table A3

Characteristics of schools.

	Control (N=16)	Bridges (N=16)	Bridges PLUS (N=16)	Chi-square or F-test	Sig.
District				4.08	
Kalungu	2	1	1		
Lwengo	2	1	0		
Masaka	3	6	4		
Rakai	9	8	11		
Nearest town				3.72	
Kyotera	9	5	9		
Masaka	6	7	5		
Kalisizo	1	4	2		
Distance to town (km)					
	18.1 (8.5)	9.6 (6.4)	14.3 (10.8)	3.8	*
Distance to the main road (km)					
	3.2 (2.9)	1.4 (2.2)	1.9 (2.7)	2	
Enrollment					
	640.8 (218.3)	611.6 (183.6)	556.2 (103.3)	0.96	
Primary Leaving Examinations (PLE)					
% students in division 1	6.5 (19.0)	8.4 (13.8)	5.1 (6.8)	0.22	
% students in division 1 or 2	39.3 (30.1)	60.3 (27.3)	46.8 (24.4)	2.41	

Notes:

+ p<0.10;

* p<0.05;

** p<0.01; the unit of analysis is school.

Table A4

Multilevel regressions for children's self-reported savings.

Outcomes	Had money saved anywhere			Log (amount of saving)		
	Logistic			Linear		
	Odd Ratio [95% Confidence Interval]			Beta-coefficient [95% Confidence Interval]		
Models	(1)	(2)	(3)	(1)	(2)	(3)
Group (Ref: Control)						
Bridges	1.09 [0.71,1.68]	1.09 [0.73,1.63]	1.08 [0.72,1.62]	0.15 [-0.49,0.79]	0.17 [-0.45,0.78]	0.16 [-0.47,0.78]
Bridges PLUS (Bridges +)	1.31 [0.85,2.02]	1.29 [0.86,1.94]	1.32 [0.88,1.98]	0.42 [-0.21,1.04]	0.42 [-0.20,1.03]	0.45 [-0.16,1.06]
Time (Ref: Baseline)						
12 Month (12M)	0.97 [0.71,1.33]	0.92 [0.67,1.25]	0.91 [0.66,1.24]	0.25 [-0.10,0.60]	0.24 [-0.11,0.59]	0.25 [-0.10,0.59]
24 Month (24M)	0.73 [0.44,1.21]	0.66 [0.40,1.09]	0.65 [0.39,1.08] +	0.41 [-0.13,0.95]	0.40 [-0.13,0.93]	0.38 [-0.14,0.91]
Group X Time						
Bridges X 12M	5.43 [3.15,9.35] ***	5.51 [3.22,9.44] ***	5.45 [3.19,9.32] ***	3.07 [2.20,3.95] ***	3.07 [2.20,3.94] ***	3.03 [2.16,3.90] ***
Bridges + X 12M	7.04 [4.07,12.17] ***	7.27 [4.21,12.54] ***	7.25 [4.21,12.47] ***	3.67 [2.84,4.51] ***	3.68 [2.84,4.52] ***	3.67 [2.83,4.50] ***
Bridges X 24M	7.67 [3.07,19.18] ***	8.30 [3.25,21.17] ***	8.39 [3.30,21.33] ***	3.12 [1.82,4.42] ***	3.13 [1.83,4.42] ***	3.13 [1.85,4.41] ***

Outcomes	Had money saved anywhere			Log (amount of saving)		
	Logistic Odd Ratio [95% Confidence Interval]			Linear Beta-coefficient [95% Confidence Interval]		
	(1)	(2)	(3)	(1)	(2)	(3)
Bridges ⁺ X 24M	16.34 [7.62,35.02] ***	18.33 [8.42,39.89] ***	18.33 [8.37,40.15] ***	4.21 [3.36,5.05] ***	4.20 [3.36,5.05] ***	4.21 [3.37,5.06] ***
Primary caregiver (Ref: Parent)						
Grandparent	0.90 [0.72,1.14]	0.96 [0.76,1.21]	0.94 [0.75,1.19]	-0.15 [-0.48,0.19]	-0.08 [-0.42,0.27]	-0.08 [-0.43,0.26]
Other relative	0.75 [0.55,1.04] ⁺	0.80 [0.57,1.11]	0.78 [0.56,1.10]	-0.45 [-0.89, -0.00] *	-0.38 [-0.84,0.08]	-0.40 [-0.86,0.07] ⁺
Double orphan	0.99 [0.76,1.30]	0.93 [0.72,1.21]	0.92 [0.71,1.20]	0.03 [-0.37,0.43]	-0.08 [-0.48,0.31]	-0.08 [-0.47,0.30]
Female		0.51 [0.42,0.63] ***	0.51 [0.41,0.63] ***		-1.09 [-1.39, -0.80] ***	-1.12 [-1.41, -0.83] ***
Age		0.96 [0.88,1.05]	0.97 [0.89,1.06]		0.02 [-0.12,0.16]	0.03 [-0.11,0.17]
Years living in the households		1.01 [0.99,1.03]	1.01 [0.99,1.03]		0.01 [-0.03,0.04]	0.01 [-0.03,0.04]
Household size			1.04 [0.97,1.11]			0.01 [-0.06,0.08]
Number of children			0.96 [0.88,1.04]			0.39 [0.08,0.70] *
Caregiver: employed			1.28 [1.05,1.57] *			
Constant	0.37 [0.25,0.56] ***	0.84 [0.27,2.61]	0.66 [0.19,2.24]	2.51 [2.05,2.98] ***	2.80 [1.03,4.57] **	2.50 [0.66,4.34] **
N	3925	3919	3906	3843	3837	3825

Notes:

⁺ p<0.10;

* p<0.05;

** p<0.01;

*** p<0.001.

Model 1 presents results from the same model as in the model presented in the main paper (see Table 3) while controlling for baseline characteristic differences across the three groups: double-orphan status and relationship to the primary caregiver. Model 2 presents results from the same model as Model 1 while additionally controlling for characteristics that differ by attrition status: age, female, years living in the household, and primary caregiver. Model 3 presents results from the same model as in Model 2 while additionally controlling for other characteristics, such as household size, number of children, and caregiver employment status.

Table A5

Multilevel regressions for children's savings using administrative bank data.

Panel 1	Opened an account			Saved any money		
	Logistic Odds Ratio [95% CI]			Logistic Odds Ratio [95% CI]		
	(1)	(2)	(3)	(1)	(2)	(3)
Group (Ref: Bridges)						
Bridges PLUS (Bridges ⁺)	1.80 [0.99,3.26] ⁺	1.85 [1.01,3.38] *	1.87 [1.02,3.43] *	2.79 [0.83,9.36] ⁺	2.78 [0.84,9.22] ⁺	2.49 [0.79,7.83]
Time (Ref: 1st Intervention Year)						
2nd Year				0.03 [0.01,0.07] ***	0.03 [0.01,0.07] ***	0.03 [0.02,0.07] ***
Group X Time						
Bridges PLUS X 2nd Year				1.12 [0.56,2.24]	1.13 [0.57,2.25]	1.23 [0.61,2.44]
Primary caregiver (Ref: Parent)						
Grandparent	0.69 [0.41,1.15]	0.68 [0.39,1.17]	0.64 [0.37,1.12]	0.48 [0.29,0.79] **	0.52 [0.31,0.88] *	0.57 [0.35,0.95] *
Other relative	0.75 [0.42,1.35]	0.77 [0.42,1.41]	0.74 [0.40,1.36]	0.46 [0.25,0.83] *	0.56 [0.30,1.03] ⁺	0.55 [0.30,1.00] *
Double orphan	1.06 [0.57,1.97]	1.09 [0.58,2.05]	1.08 [0.57,2.01]	0.79 [0.43,1.43]	0.79 [0.44,1.44]	0.82 [0.45,1.47]
Female		1.01 [0.67,1.52]	0.99 [0.64,1.52]		1.25 [0.81,1.92]	1.25 [0.81,1.92]
Age		0.73 [0.62,0.86] ***	0.72 [0.62,0.85] ***		0.83 [0.70,0.98] *	0.86 [0.73,1.02] ⁺
Years living in the households		1.02 [0.98,1.06]	1.02 [0.98,1.06]		1.06 [1.01,1.11] *	1.05 [1.00,1.10] *

Panel 1						
Opened an account			Saved any money			
Logistic Odds Ratio [95% CI]			Logistic Odds Ratio [95% CI]			
Model	(1)	(2)	(3)	(1)	(2)	(3)
Household size			1.10 [0.89,1.36]			0.97 [0.84,1.11]
Number of children			0.90 [0.71,1.14]			0.98 [0.83,1.15]
Caregiver: employed			1.13 [0.65,1.97]			1.76 [1.09,2.84] *
Constant	6.33 [3.56,11.26] ***	299.07 [27.94,3201.15] ***	262.99 [23.71,2916.49] ***	1.16 [0.48,2.82]	6.53 [0.62,69.37]	5.68 [0.52,61.89]
N	896	894	890	1792	1788	1635
Panel 2						
Number of deposits			Log(monthly savings)			
Poisson IRR [95% CI]			Linear Beta-coefficient [95% CI]			
Model	(1)	(2)	(3)	(1)	(2)	(3)
Group (Ref: Bridges)						
Bridges PLUS (Bridges ⁺)	2.07 [1.11,3.84] *	2.05 [1.11,3.78] *	1.97 [1.06,3.67] *	0.93 [-0.31,2.17]	0.92 [-0.31,2.15]	0.85 [-0.41,2.12]
Time (Ref: 1st Intervention Year)						
2nd Year	0.06 [0.02,0.15] ***	0.06 [0.02,0.15] ***	0.07 [0.03,0.17] ***	-2.57 [-3.38, -1.77] ***	-2.58 [-3.39, -1.77] ***	-2.69 [-3.54, -1.84] ***
Group X Time						
Bridges PLUS X 2nd Year	1.00 [0.47,2.17]	1.01 [0.47,2.17]	0.98 [0.48,2.00]	-0.79 [-1.75,0.17]	-0.77 [-1.73,0.19]	-0.68 [-1.69,0.34]
Primary caregiver (Ref: Parent)						
Grandparent	0.79 [0.61,1.03] ⁺	0.81 [0.62,1.05]	0.83 [0.64,1.07]	-0.36 [-0.71, -0.01] *	-0.28 [-0.64,0.08]	-0.28 [-0.69,0.14]
Other relative	0.80 [0.61,1.05]	0.84 [0.65,1.10]	0.81 [0.63,1.04]	-0.37 [-0.77,0.04] ⁺	-0.21 [-0.64,0.22]	-0.24 [-0.71,0.22]
Double orphan	0.91 [0.68,1.23]	0.93 [0.70,1.24]	0.90 [0.66,1.23]	-0.36 [-0.75,0.03] ⁺	-0.35 [-0.74,0.04] ⁺	-0.36 [-0.80,0.08]
Female		1.15 [0.95,1.38]	1.12 [0.93,1.36]		0.18 [-0.11,0.47]	0.22 [-0.07,0.52]
Age		0.91 [0.83,1.00] ⁺	0.91 [0.83,1.01] ⁺		-0.10 [-0.22,0.03]	-0.08 [-0.23,0.07]
Years living in the households		1.02 [0.99,1.04]	1.01 [0.99,1.04]		0.05 [0.02,0.08] **	0.04 [0.01,0.08] *
Household size			1.01 [0.96,1.06]			-0.05 [-0.14,0.04]
Number of children			0.98 [0.92,1.04]			0.36 [-0.04,0.76] ⁺
Caregiver: employed			1.08 [0.87,1.35]			-0.00 [-0.12,0.11]
Constant	0.59 [0.33,1.07] ⁺	1.50 [0.44,5.11]	1.65 [0.46,5.96]	3.74 [2.66,4.82] ***	4.47 [2.78,6.15] ***	4.61 [2.59,6.64] ***
N	1792	1788	1635	1792	1788	1635
Panel 3						
Log(monthly savings + matched savings)						
Linear Beta-coefficient [95% CI]						
Model	(1)	(2)	(3)			
Group (Ref: Bridges)						
Bridges PLUS (Bridges ⁺)	1.26 [-0.10,2.61] ⁺	1.24 [-0.11,2.59] ⁺	1.18 [-0.21,2.57] ⁺			
Time (Ref: 1st Intervention Year)						
2nd Year	-2.81 [-3.69, -1.93] ***	-2.82 [-3.70, -1.94] ***	-2.94 [-3.87, -2.01] ***			
Group X Time						
Bridges PLUS X 2nd Year	-1.04 [-2.10,0.02] ⁺	-1.02 [-2.08,0.04] ⁺	-0.92 [-2.04,0.21]			
Primary caregiver (Ref: Parent)						
Grandparent	-0.39 [-0.77, -0.01] *	-0.30 [-0.69,0.10]	-0.29 [-0.75,0.17]			
Other relative	-0.40 [-0.85,0.05] ⁺	-0.22 [-0.69,0.26]	-0.26 [-0.78,0.26]			
Double orphan	-0.40 [-0.83,0.04] ⁺	-0.39 [-0.83,0.04] ⁺	-0.40 [-0.89,0.09]			
Female		0.19 [-0.13,0.52]	0.24 [-0.09,0.58]			
Age		-0.11 [-0.25,0.03]	-0.09 [-0.25,0.07]			
Years living in the households		0.05 [0.02,0.09] **	0.05 [0.01,0.09] *			

Panel 1	Opened an account			Saved any money		
	Logistic Odds Ratio [95% CI]			Logistic Odds Ratio [95% CI]		
Model	(1)	(2)	(3)	(1)	(2)	(3)
Household size			-0.05 [-0.15,0.05]			
Number of children			0.40 [-0.04,0.84] ⁺			
Caregiver: employed			-0.00 [-0.13,0.12]			
Constant	4.08 [2.90,5.25] ***	4.89 [3.04,6.73] ***	5.04 [2.82,7.25] ***			
N	1792	1788	1635			

Notes:

⁺ p<0.10;

* p<0.05;

** p<0.01;

*** p<0.001.

The sample of analysis (intent-to-treat sample) includes children in the two intervention arms (both children who did [82 to 90 percent] and did not [10 to 18 percent] open a bank account). Analyses on children who opened a bank account (treated sample) are included in Table A7. The outcome data in this analysis were obtained from children's bank statements. Please see Table A4 for model specification.

Table A6

Multilevel regressions for material hardship and resources.

Panel 1	Few sets of clothes (2 or less)			No blanket		
	Logistic Odds Ratio [95% CI]			Logistic Odds Ratio [95% CI]		
Model	(1)	(2)	(3)	(1)	(2)	(3)
Group (Ref: Control)						
Bridges	1.01 [0.50,2.00]	1.02 [0.54,1.94]	1.02 [0.54,1.89]	0.59 [0.26,1.33]	0.59 [0.26,1.33]	0.57 [0.25,1.26]
Bridges PLUS (+)	0.84 [0.45,1.58]	0.87 [0.48,1.57]	0.87 [0.49,1.55]	1.09 [0.55,2.17]	1.06 [0.54,2.11]	1.06 [0.54,2.09]
Time (Ref: Baseline)						
12 Month (12M)	1.39 [0.83,2.31]	1.25 [0.74,2.09]	1.21 [0.72,2.05]	0.72 [0.51,1.01] ⁺	0.72 [0.51,1.01] ⁺	0.72 [0.52,1.01] ⁺
24 Month (24M)	1.02 [0.53,1.94]	0.82 [0.40,1.71]	0.81 [0.39,1.70]	0.23 [0.11,0.45] ***	0.23 [0.12,0.45] ***	0.23 [0.12,0.45] ***
Group X Time						
Bridges X 12M	0.45 [0.21,0.97] *	0.45 [0.21,0.96] *	0.45 [0.21,0.97] *	0.56 [0.30,1.05] ⁺	0.56 [0.30,1.04] ⁺	0.58 [0.32,1.08] ⁺
Bridges ⁺ X 12M	0.57 [0.32,1.04] ⁺	0.56 [0.31,1.01] ⁺	0.56 [0.32,1.01] ⁺	0.54 [0.33,0.88] *	0.54 [0.33,0.87] *	0.54 [0.33,0.87] *
Bridges X 24M	0.45 [0.23,0.90] *	0.44 [0.22,0.87] *	0.43 [0.22,0.84] *	0.32 [0.14,0.74] ***	0.32 [0.14,0.73] ***	0.36 [0.17,0.77] **
Bridges ⁺ X 24M	0.43 [0.20,0.91] *	0.40 [0.20,0.83] *	0.40 [0.19,0.82] *	0.44 [0.20,0.98] *	0.44 [0.20,0.97] *	0.45 [0.21,0.98] *
Primary caregiver (Ref: Parent)						
Grandparent	0.73 [0.52,1.04] ⁺	0.77 [0.55,1.09]	0.76 [0.54,1.08]	1.18 [0.83,1.67]	1.07 [0.72,1.59]	1.06 [0.72,1.56]
Other relative	0.80 [0.57,1.12]	0.82 [0.57,1.19]	0.82 [0.56,1.20]	1.11 [0.72,1.71]	0.95 [0.60,1.51]	0.94 [0.59,1.49]
Double orphan	1.28 [0.89,1.83]	1.18 [0.82,1.70]	1.17 [0.81,1.69]	0.96 [0.70,1.32]	1.01 [0.73,1.40]	1.01 [0.74,1.39]
Female		0.48 [0.34,0.69] ***	0.49 [0.34,0.71] ***		1.26 [0.94,1.68]	1.26 [0.94,1.70]
Age		1.02 [0.89,1.17]	1.01 [0.88,1.16]		1.01 [0.86,1.18]	1.00 [0.86,1.17]
Years living in the households		1.01 [0.97,1.05]	1.00 [0.96,1.04]		0.96 [0.92,1.00] ⁺	0.96 [0.91,1.00] *
Household size			1.07 [0.96,1.19]			1.05 [0.94,1.17]
Number of children			0.98 [0.87,1.09]			1.00 [0.86,1.16]
Caregiver: employed			0.84 [0.59,1.20]			0.86 [0.60,1.24]
Constant	0.78 [0.04,0.16] ***	0.10 [0.01,0.82] *	0.08 [0.01,0.63] *	0.30 [0.16,0.56] ***	0.36 [0.04,3.41]	0.30 [0.03,3.06]
N	3925	3919	3906	3924	3918	3905
Panel 2						
	No shoes			No meat/fish in past week		

Panel 1	Few sets of clothes (2 or less)			No blanket		
	Logistic Odds Ratio [95% CI]			Logistic Odds Ratio [95% CI]		
	(1)	(2)	(3)	(1)	(2)	(3)
Model	(1)	(2)	(3)	(1)	(2)	(3)
Group (Ref: Control)						
Bridges	0.36 [0.15,0.90] *	0.36 [0.15,0.89] *	0.37 [0.15,0.91] *	0.98 [0.55,1.77]	1.00 [0.56,1.79]	1.00 [0.56,1.79]
Bridges PLUS (+)	0.58 [0.25,1.30]	0.57 [0.25,1.30]	0.56 [0.25,1.26]	1.08 [0.66,1.79]	1.10 [0.66,1.83]	1.09 [0.66,1.82]
Time (Ref: Baseline)						
12 Month (12M)	0.38 [0.19,0.75] **	0.38 [0.19,0.75] **	0.38 [0.19,0.75] **	1.01 [0.64,1.59]	1.02 [0.64,1.62]	1.03 [0.65,1.63]
24 Month (24M)	0.08 [0.02,0.26] ***	0.08 [0.02,0.27] ***	0.08 [0.02,0.27] ***	0.79 [0.50,1.25]	0.79 [0.50,1.26]	0.81 [0.51,1.29]
Group X Time						
Bridges X 12M	0.66 [0.34,1.26]	0.65 [0.34,1.26]	0.65 [0.33,1.28]	0.62 [0.33,1.15]	0.61 [0.33,1.14]	0.62 [0.33,1.15]
Bridges ⁺ X 12M	0.78 [0.39,1.57]	0.78 [0.39,1.57]	0.77 [0.38,1.57]	0.70 [0.43,1.14]	0.69 [0.42,1.14]	0.69 [0.42,1.13]
Bridges X 24M	0.93 [0.40,2.17]	0.93 [0.40,2.16]	0.85 [0.35,2.06]	0.94 [0.46,1.92]	0.93 [0.45,1.91]	0.90 [0.44,1.85]
Bridges ⁺ X 24M	0.36 [0.12,1.12] ⁺	0.36 [0.12,1.13] ⁺	0.36 [0.11,1.14] ⁺	0.86 [0.45,1.64]	0.85 [0.44,1.63]	0.85 [0.44,1.64]
Primary caregiver (Ref: Parent)						
Grandparent	0.91 [0.60,1.38]	0.94 [0.60,1.46]	0.94 [0.60,1.48]	0.84 [0.65,1.08]	0.86 [0.68,1.10]	0.88 [0.70,1.12]
Other relative	0.84 [0.51,1.40]	0.87 [0.51,1.49]	0.88 [0.51,1.51]	0.75 [0.56,1.01] ⁺	0.79 [0.58,1.08]	0.81 [0.59,1.11]
Double orphan	1.52 [1.04,2.24] *	1.48 [1.01,2.17] *	1.48 [1.02,2.14] *	1.40 [1.07,1.82] *	1.37 [1.05,1.79] *	1.39 [1.07,1.81] *
Female		0.92 [0.66,1.27]	0.92 [0.67,1.27]		0.88 [0.72,1.08]	0.87 [0.70,1.07]
Age		1.02 [0.89,1.16]	1.01 [0.88,1.15]		1.00 [0.92,1.09]	1.00 [0.92,1.09]
Years living in the households		1.01 [0.98,1.05]	1.01 [0.97,1.04]		1.01 [0.98,1.05]	1.01 [0.98,1.05]
Household size			1.00 [0.90,1.11]			0.93 [0.88,1.00] *
Number of children			1.07 [0.94,1.23]			1.08 [1.01,1.16] *
Caregiver: employed			0.62 [0.43,0.90] *			0.91 [0.73,1.14]
Constant	0.39 [0.16,0.96] *	0.31 [0.04,2.19]	0.33 [0.05,2.24]	0.56 [0.37,0.87] *	0.53 [0.15,1.84]	0.68 [0.20,2.33]
N	3925	3919	3906	3925	3919	3906
Panel 3	Had one meal or less per day			No sugar for tea last week		
	Logistic Odds Ratio [95% CI]			Logistic Odds Ratio [95% CI]		
	(1)	(2)	(3)	(1)	(2)	(3)
Model	(1)	(2)	(3)	(1)	(2)	(3)
Group (Ref: Control)						
Bridges	1.36 [0.75,2.47]	1.41 [0.76,2.59]	1.39 [0.75,2.57]	0.69 [0.31,1.55]	0.71 [0.31,1.62]	0.70 [0.30,1.62]
Bridges PLUS (+)	1.23 [0.72,2.12]	1.28 [0.73,2.24]	1.27 [0.73,2.23]	0.69 [0.33,1.47]	0.70 [0.32,1.53]	0.69 [0.31,1.55]
Time (Ref: Baseline)						
12 Month (12M)	0.70 [0.33,1.47]	0.76 [0.43,1.36]	0.76 [0.42,1.38]	0.81 [0.42,1.53]	0.88 [0.46,1.66]	0.91 [0.49,1.72]
24 Month (24M)	0.46 [0.20,1.10] ⁺	0.53 [0.28,1.02] ⁺	0.52 [0.27,1.00] *	0.37 [0.14,0.94] *	0.43 [0.17,1.09] ⁺	0.46 [0.18,1.16]
Group X Time						
Bridges X 12M	0.45 [0.20,1.01] ⁺	0.44 [0.20,0.99] *	0.42 [0.19,0.93] *	0.53 [0.21,1.34]	0.53 [0.21,1.35]	0.55 [0.21,1.41]
Bridges ⁺ X 12M	0.83 [0.45,1.54]	0.81 [0.43,1.52]	0.81 [0.43,1.51]	1.50 [0.74,3.02]	1.50 [0.73,3.07]	1.51 [0.73,3.10]
Bridges X 24M	0.35 [0.19,0.65] ***	0.35 [0.19,0.64] ***	0.35 [0.19,0.63] ***	0.49 [0.21,1.14] ⁺	0.51 [0.22,1.18]	0.54 [0.23,1.27]
Bridges ⁺ X 24M	0.55 [0.29,1.04] ⁺	0.54 [0.28,1.03] ⁺	0.55 [0.29,1.05] ⁺	0.81 [0.40,1.66]	0.83 [0.41,1.70]	0.86 [0.41,1.78]
Primary caregiver (Ref: Parent)						
Grandparent	1.09 [0.75,1.59]	1.14 [0.79,1.65]	1.17 [0.82,1.67]	0.72 [0.46,1.13]	0.79 [0.50,1.26]	0.80 [0.51,1.27]
Other relative	0.84 [0.58,1.21]	0.92 [0.61,1.36]	0.96 [0.64,1.43]	0.59 [0.39,0.90] *	0.66 [0.42,1.03] ⁺	0.65 [0.42,1.01] ⁺
Double orphan	1.49 [1.08,2.05] *	1.42 [1.03,1.96] *	1.43 [1.04,1.96] *	1.32 [0.93,1.89]	1.24 [0.87,1.78]	1.24 [0.85,1.79]

Panel 1	Few sets of clothes (2 or less)			No blanket		
	Logistic Odds Ratio [95% CI]			Logistic Odds Ratio [95% CI]		
	(1)	(2)	(3)	(1)	(2)	(3)
Female		0.61 [0.46,0.81] ***	0.61 [0.45,0.81] ***		0.81 [0.59,1.10]	0.78 [0.57,1.07]
Age		0.98 [0.86,1.11]	0.97 [0.86,1.11]		1.11 [0.98,1.25]	1.11 [0.97,1.26]
Years living in the households		1.02 [0.98,1.06]	1.02 [0.98,1.06]		1.03 [0.99,1.08]	1.03 [0.99,1.08]
Household size			0.97 [0.88,1.06]			0.99 [0.88,1.10]
Number of children			1.02 [0.91,1.14]			1.12 [0.98,1.28] ⁺
Caregiver: employed			0.93 [0.68,1.26]			1.02 [0.72,1.45]
Constant	0.14 [0.06,0.32] ***	0.18 [0.03,0.97] *	0.23 [0.04,1.26] ⁺	0.20 [0.11,0.36] ***	0.04 [0.01,0.24] ***	0.03 [0.01,0.19] ***
N	3925	3919	3906	3924	3918	3905
Panel 4	Owned small business			Asset index (range 1–18)		
	Logistic Odds Ratio [95% CI]			Linear Beta-coefficient [95% CI]		
	(1)	(2)	(3)	(1)	(2)	(3)
Group (Ref: Control)						
Bridges	1.62 [1.01,2.60] *	1.60 [1.00,2.56] *	1.58 [0.98,2.53] ⁺	-0.29 [-1.00,0.42]	-0.28 [-1.00,0.45]	-0.24 [-0.95,0.47]
Bridges PLUS (Bridges ⁺)	1.32 [0.84,2.07]	1.32 [0.85,2.04]	1.33 [0.86,2.06]	-0.12 [-0.73,0.49]	-0.12 [-0.74,0.50]	-0.10 [-0.74,0.53]
Time (Ref: Baseline)						
12 Month (12M)	0.63 [0.45,0.88] ***	0.64 [0.46,0.88] ***	0.63 [0.45,0.88] ***	0.25 [-0.06,0.56]	0.23 [-0.08,0.54]	0.21 [-0.10,0.53]
24 Month (24M)	0.58 [0.36,0.94] *	0.58 [0.36,0.94] *	0.57 [0.34,0.94] *	0.29 [-0.01,0.59] ⁺	0.27 [-0.03,0.58] ⁺	0.32 [0.03,0.61] *
Group X Time						
Bridges X 12M	1.10 [0.68,1.77]	1.09 [0.68,1.76]	1.11 [0.70,1.78]	0.60 [0.14,1.07] *	0.62 [0.14,1.09] *	0.64 [0.18,1.11] ***
Bridges ⁺ X 12M	1.08 [0.70,1.67]	1.07 [0.69,1.65]	1.06 [0.69,1.64]	0.37 [0.02,0.72] *	0.39 [0.03,0.74] *	0.40 [0.05,0.76] *
Bridges X 24M	1.35 [0.75,2.44]	1.35 [0.75,2.43]	1.35 [0.73,2.47]	0.54 [0.10,0.99] *	0.55 [0.10,1.00] *	0.51 [0.08,0.94] *
Bridges ⁺ X 24M	2.17 [1.17,4.04] *	2.17 [1.17,4.03] *	2.19 [1.16,4.15] *	0.40 [-0.01,0.81] ⁺	0.41 [-0.00,0.82] ⁺	0.38 [-0.02,0.78] ⁺
Primary caregiver (Ref: Parent)						
Grandparent	0.67 [0.51,0.87] ***	0.64 [0.48,0.84] ***	0.63 [0.48,0.83] ***	0.79 [0.41,1.16] ***	0.96 [0.57,1.35] ***	0.86 [0.49,1.24] ***
Other relative	1.20 [0.90,1.59]	1.14 [0.86,1.50]	1.11 [0.84,1.47]	0.79 [0.42,1.16] ***	1.04 [0.65,1.43] ***	0.89 [0.51,1.27] ***
Double orphan	0.73 [0.54,0.97] *	0.78 [0.57,1.06]	0.77 [0.57,1.05]	-0.17 [-0.52,0.18]	-0.29 [-0.64,0.06]	-0.34 [-0.67, -0.02] *
Female		1.42 [1.14,1.78] ***	1.45 [1.15,1.82] ***		-0.75 [-1.05, -0.45] ***	-0.72 [-1.04, -0.40] ***
Age		0.93 [0.83,1.04]	0.94 [0.84,1.05]		-0.01 [-0.13,0.11]	-0.01 [-0.13,0.11]
Years living in the households		0.99 [0.96,1.01]	0.99 [0.96,1.01]		0.06 [0.03,0.09] ***	0.06 [0.03,0.09] ***
Household size			1.03 [0.97,1.10]			0.26 [0.17,0.35] ***
Number of children			0.98 [0.90,1.08]			0.04 [-0.29,0.38]
Caregiver: employed			1.09 [0.82,1.45]			-0.05 [-0.14,0.05]
Constant	0.43 [0.30,0.60] ***	1.01 [0.21,4.94]	0.76 [0.16,3.75]	9.01 [8.44,9.58] ***	9.01 [7.12,10.91] ***	7.55 [5.73,9.38] ***
N	3925	3919	3906	3925	3919	3906

Notes:

⁺
p<0.10;*
p<0.05;***
p<0.01;***
p<0.001.

Please see Table A4 for model specification.

Table A7

Multilevel regressions for children's savings.

Panel 1	Saved any money			Number of deposits		
	Logistic Odds Ratio [95% CI]			Poisson IRR [95% CI]		
Model	(1)	(2)	(3)	(1)	(2)	(3)
Group (Ref: Bridges)						
Bridges PLUS (Bridges ⁺)	2.01 [0.63,6.41]	2.02 [0.64,6.43]	2.02 [0.67,6.06]	1.91 [1.02,3.58] *	1.90 [1.02,3.52] *	1.86 [1.00,3.49] ⁺
Time (Ref: 1st Intervention Year)						
2nd Year	0.02 [0.01,0.06] ***	0.02 [0.01,0.06] ***	0.03 [0.01,0.07] ***	0.07 [0.03,0.17] ***	0.07 [0.03,0.17] ***	0.08 [0.04,0.18] ***
Group X Time						
Bridges PLUS X 2nd Year	1.38 [0.68,2.80]	1.37 [0.68,2.76]	1.39 [0.69,2.79]	0.94 [0.45,1.97]	0.95 [0.46,1.97]	0.95 [0.48,1.90]
Primary caregiver (Ref: Parent)						
Grandparent	0.56 [0.35,0.90] *	0.62 [0.39,1.00] ⁺	0.66 [0.41,1.06] ⁺	0.86 [0.69,1.08]	0.88 [0.70,1.11]	0.89 [0.71,1.11]
Other relative	0.47 [0.27,0.82] **	0.57 [0.32,1.01] ⁺	0.58 [0.33,1.03] ⁺	0.83 [0.65,1.05]	0.86 [0.68,1.08]	0.84 [0.67,1.04]
Double orphan	0.76 [0.44,1.33]	0.75 [0.43,1.31]	0.76 [0.44,1.32]	0.88 [0.70,1.11]	0.89 [0.71,1.13]	0.87 [0.68,1.12]
Female		1.22 [0.82,1.83]	1.27 [0.85,1.90]		1.13 [0.95,1.35]	1.12 [0.93,1.33]
Age		0.94 [0.80,1.10]	0.97 [0.83,1.13]		0.96 [0.89,1.04]	0.96 [0.88,1.04]
Years living in the households		1.06 [1.01,1.11] *	1.05 [1.01,1.10] *		1.01 [0.99,1.04]	1.01 [0.99,1.04]
Household size			0.96 [0.85,1.10]			1.01 [0.97,1.05]
Number of children			0.97 [0.83,1.13]			0.97 [0.92,1.03]
Caregiver: employed			1.73 [1.11,2.71] *			1.08 [0.88,1.32]
Constant	2.24 [0.94,5.32] ⁺	2.75 [0.30,24.89]	2.25 [0.24,21.04]	0.80 [0.44,1.45]	1.12 [0.40,3.15]	1.25 [0.41,3.83]
N	1548	1546	1445	1548	1546	1445
Panel 2	Log(monthly savings)			Log(monthly savings + matched savings)		
	Linear Beta-coefficient [95% CI]			Linear Beta-coefficient [95% CI]		
Model	(1)	(2)	(3)	(1)	(2)	(3)
Group (Ref: Bridges)						
Bridges PLUS (Bridges ⁺)	0.73 [-0.66,2.12]	0.73 [-0.66,2.11]	0.73 [-0.65,2.12]	1.07 [-0.46,2.60]	1.06 [-0.46,2.59]	1.07 [-0.45,2.60]
Time (Ref: 1st Intervention Year)						
2nd Year	-3.12 [-4.07, -2.18] ***	-3.12 [-4.07, -2.18] ***	-3.14 [-4.11, -2.16] ***	-3.42 [-4.46, -2.38] ***	-3.42 [-4.46, -2.38] ***	-3.43 [-4.50, -2.36] ***
Group X Time						
Bridges PLUS X 2nd Year	-0.62 [-1.76,0.51]	-0.62 [-1.75,0.52]	-0.57 [-1.74,0.60]	-0.88 [-2.14,0.37]	-0.87 [-2.13,0.38]	-0.82 [-2.11,0.48]
Primary caregiver (Ref: Parent)						
Grandparent	-0.35 [-0.78,0.07]	-0.26 [-0.69,0.17]	-0.25 [-0.75,0.24]	-0.38 [-0.85,0.09]	-0.27 [-0.75,0.21]	-0.26 [-0.81,0.29]
Other relative	-0.44 [-0.92,0.04] ⁺	-0.27 [-0.77,0.22]	-0.28 [-0.79,0.22]	-0.29 [-0.84,0.26]	-0.29 [-0.84,0.26]	-0.30 [-0.86,0.26]
Double orphan	-0.43 [-0.87,0.00] ⁺	-0.43 [-0.87,0.00] ⁺	-0.43 [-0.92,0.06] ⁺	-0.48 [-0.97,0.01] ⁺	-0.48 [-0.97,0.00] ⁺	-0.48 [-1.03,0.06] ⁺
Female		0.20 [-0.16,0.56]	0.26 [-0.10,0.61]		0.21 [-0.19,0.61]	0.27 [-0.12,0.67]
Age		-0.03 [-0.17,0.10]	-0.00 [-0.16,0.15]		-0.04 [-0.19,0.11]	-0.01 [-0.17,0.16]
Years living in the households		0.05 [0.02,0.09] **	0.05 [0.01,0.09] *		0.06 [0.02,0.10] **	0.06 [0.02,0.10] **
Household size			-0.05 [-0.15,0.04]			-0.06 [-0.16,0.04]
Number of children			0.41 [-0.05,0.86] ⁺			0.46 [-0.04,0.95] ⁺
Caregiver: employed			-0.01 [-0.13,0.11]			-0.01 [-0.14,0.12]
Constant	4.49 [3.27,5.72] ***	4.34 [2.53,6.16] ***	4.27 [2.30,6.24] ***	4.90 [3.57,6.22] ***	4.74 [2.74,6.74] ***	4.65 [2.49,6.82] ***
N	1548	1546	1445	1548	1546	1445

Notes:

⁺ p<0.10;

*
p<0.05;
**
p<0.01;

p<0.001.

The sample of analysis (treated sample) is restricted to children who opened a bank account in the two intervention arms. The outcome data in this analysis were obtained from children's bank statements. Please see Table A4 for model specification.

Figure 1.
CONSORT Flow Diagram—The *Bridges to the Future* Study.

Notes: The study uses an intent-to-treat design. Therefore, children who did not respond to the 12-month interview were tracked and followed up at 24-months. Thus, the lost-to-follow-up numbers at 12 months and 24 months post-intervention initiation are relative to the baseline number.

Table 1

Descriptive demographic characteristics at baseline.

	Control (N=487)		Bridges (N=396)		Bridges PLUS (N=500)		Total (N=1,383)		Wald-tests
	Mean / %	SD	Mean / %	SD	Mean / %	SD	Mean / %	SD	
Age	12.75	1.23	12.56	1.31	12.71	1.25	12.68	1.26	2.74
Female	0.55		0.57		0.56		0.56		0.21
Household size	6.43	2.97	6.29	2.62	6.32	2.74	6.35		1.33
Number of children	3.18	2.32	3.14	2.08	3.23	2.18	3.19		0.62
Years living in the households	7.12	4.41	7.19	4.44	7.44	4.54	7.26	4.46	0.88
Double orphan	0.25		0.18		0.20		0.21		6.84*
Primary caregiver									18.96**
Parents	0.37		0.41		0.44		0.41		
Grandparents	0.40		0.35		0.36		0.37		
Other relatives	0.23		0.24		0.21		0.23		
Caregiver: employed	0.31		0.34		0.24		0.29		0.59

Notes:

+ p<0.10;

* p<0.05;

** p<0.01.

To examine whether children across three groups are different in terms of their demographic characteristics, we employed a multilevel model for each characteristic and used group-membership variables to predict that characteristic. In each multilevel model, we included school-level random intercepts to account for clustering at the school level. We reported the test statistic and *p*-value from the Wald test after each model, testing whether coefficients for group membership are jointly equal to zero. Pairwise tests suggest that children receiving Usual Care are more likely to be a double orphan at baseline than children receiving the *Bridges* intervention. The difference between Usual Care and *Bridges PLUS* and between *Bridges* and *Bridges PLUS* are not statistically significant. In addition, children receiving *Bridges* and *Bridges PLUS* were less likely to receive care from grandparents compared to parents.

Table 2

Descriptive outcome characteristics.

Second Intervention Year										
Panel 1: MIS Savings Data	First Intervention Year		Control		Bridges		Bridges PLUS		Wald-tests	
	Control		Bridges		Mean / %		SD		Bridges PLUS	
	Mean / %		Mean / %		Mean / %		SD		Mean / %	
Among all children:										
Opened a bank account	--	n=396	--	N=500	--	n=396	--	N=481	--	1.88
Saved any money in the bank account	--	0.82	--	0.90	--	3.99 [*]	--	--	--	1.82
Number of deposits	--	0.48	--	0.60	--	3.80 ⁺	--	0.19	0.13	0.05
Average monthly net savings (UGX)	--	1.33	--	1.76	--	3.83 ⁺	--	0.58	1.87	0.1
Average monthly net savings + match (UGX)	--	1.709	--	1.815	--	3.43 ⁺	--	235	9,576	
	--	3.226	--	5.302	--	4.87 [*]	--	608	10,795	
Among children who opened an account:										
Saved any money in the bank account	--	n=326	--	N=448	--	n=326	--	N=448	--	1.40
Number of deposits	--	0.58	--	0.67	--	2.17	--	0.21	0.16	1.37
Average monthly net savings (UGX)	--	1.62	--	1.96	--	2.20	--	0.65	2.05	0.00
Average monthly net savings + match (UGX)	--	2.076	--	2.025	--	1.85	--	263	10,541	0.03
	--	3.919	--	5.917	--	2.96 ⁺	--	678	11,872	
Baseline										
Panel 2: Interview Data										
Savings										
Have savings	0.28	0.30	0.34	0.30	0.62	0.70	0.29	0.62	0.75	97.69 ^{*** a, b}
Amount of savings (UGX)	1.999	2.097	2.364	5.589	20.082	22.736	7.252	31.617	37,324	107.63 ^{*** a, b, c}
Material hardships										
Few sets of clothes (2 or less)	0.15	0.14	0.13	0.17	0.09	0.09	0.15	0.08	0.07	11.48 ^{*** a, b}
No blanket	0.35	0.26	0.34	0.32	0.18	0.24	0.24	0.11	0.17	13.06 ^{* a}
No shoes	0.37	0.23	0.28	0.25	0.10	0.15	0.13	0.07	0.05	13.96 ^{*** b}
No meat/fish in past week	0.38	0.39	0.38	0.39	0.33	0.33	0.37	0.38	0.35	0.21
Have one meal or less per day	0.17	0.21	0.19	0.17	0.12	0.16	0.18	0.12	0.14	5.70 ⁺
No sugar for tea last week	0.26	0.21	0.20	0.23	0.13	0.22	0.19	0.11	0.13	6.81 ^{* a}
Material resources										

Table 3

Multilevel regressions for children's self-reported savings.

Outcomes	Had money saved anywhere	Log (amount of saving)
Models	Logistic Odd Ratio [95% Confidence Interval]	Linear Beta-coefficient [95% Confidence Interval]
Group (Ref: Control)		
Group $\chi^2(2)$	1.77	1.91
Bridges	1.10 [0.70,1.71]	0.15 [-0.50,0.81]
Bridges PLUS (Bridges ⁺)	1.33 [0.85,2.07]	0.43 [-0.20,1.07]
Time (Ref: Baseline)		
Time $\chi^2(2)$	1.59	3.81
12 Month (12M)	0.98 [0.71,1.33]	0.25 [-0.10,0.59]
24 Month (24M)	0.74 [0.45,1.22]	0.41 [-0.13,0.94]
Group X Time		
Group X Time $\chi^2(4)$	82.29 ***	159.35 ***
Bridges X 12M	5.42 [3.14,9.33] ***	3.07 [2.20,3.95] ***
Bridges ⁺ X 12M	7.02 [4.06,12.15] ***	3.68 [2.84,4.51] ***
Bridges X 24M	7.61 [3.06,18.93] ***	3.12 [1.83,4.42] ***
Bridges ⁺ X 24M	16.13 [7.51,34.62] ***	4.21 [3.36,5.06] ***
Constant	0.34 [0.22, 0.51] ***	2.36 [1.88,2.84] ***
Variance of School Random Intercepts	0.08 [0.03, 0.21]	1.70 [0.06, 0.49]
Variance of Child Random Slopes (time)	0.50 [0.16,1.60]	0.71 [0.45, 1.12]
Variance of Child Random Intercepts	0.84 [0.29, 2.43]	1.22 [0.80, 1.87]
Covariance of Child Slopes & Intercepts	0.12 [-0.42, 0.66]	0.93 [0.74, 1.12]
Observations	3925	3843
N	1383	1383
Pairwise comparisons		
0M Bridges vs. Control	1.10 [0.64, 1.88]	0.15 [-0.65, 0.95]
0M Bridges ⁺ vs. Control	1.33 [0.77, 2.28]	0.43 [-0.34, 1.20]
0M Bridges ⁺ vs. Bridges	1.21 [0.76, 1.93]	0.28 [-0.46, 1.02]
12M Bridges vs. Control	5.94 [3.47, 10.16] ***	3.23 [2.39, 4.06] ***
12M Bridges ⁺ vs. Control	9.31 [5.25, 16.52] ***	4.11 [3.24, 4.98] ***
12M Bridges ⁺ vs. Bridges	1.57 [0.89, 2.77]	0.88 [-0.13, 1.90]
24M Bridges vs. Control	8.34 [3.05, 22.79] ***	3.27 [1.93, 4.62] ***
24M Bridges ⁺ vs. Control	21.38 [9.22, 49.57] ***	4.64 [3.73, 5.56] ***

Outcomes	Had money saved anywhere	Log (amount of saving)
Models	Logistic Odd Ratio [95% Confidence Interval]	Linear Beta-coefficient [95% Confidence Interval]
24M Bridges ⁺ vs. Bridges	2.56 [1.09, 6.03] *	1.37 [0.06, 2.68] *
Control 12M vs. 0M	0.98 [0.67, 1.43]	0.25 [−0.17, 0.67]
Control 24M vs. 0M	0.74 [0.40, 1.36]	0.41 [−0.25, 1.06]
Control 24M vs. 12M	0.76 [0.44, 1.31]	0.16 [−0.58, 0.90]
Bridges 12M vs. 0M	5.28 [2.91, 9.59] ***	3.32 [2.35, 4.29] ***
Bridges 24M vs. 0M	5.64 [2.14, 14.85] ***	3.53 [2.09, 4.97] ***
Bridges 24M vs. 12M	1.07 [0.59, 1.91]	0.21 [−0.69, 1.11]
Bridges ⁺ 12M vs. 0M	6.85 [3.83, 12.26] ***	3.92 [3.00, 4.85] ***
Bridges ⁺ 24M vs. 0M	11.94 [6.36, 22.43] ***	4.62 [3.82, 5.42] ***
Bridges ⁺ 24M vs. 12M	1.74 [1.02, 2.98] *	0.69 [−0.12, 1.51]

Notes:

⁺ p<0.10;

* p<0.05;

** p<0.01;

*** p<0.001.

The sample of analysis included at most three observations from each child in the three study arms.

Table 4

Multilevel regressions for children's savings using administrative bank data.

Outcomes	Opened an account	Saved any money	Number of deposits	Log(monthly savings)	Log(monthly savings + matched savings)
Models	Logistic Odds Ratio [95% CI]	Logistic Odds Ratio [95% CI]	Poisson IRR [95% CI]	Linear Beta-coefficient [95% CI]	Linear Beta-coefficient [95% CI]
Group (Ref: Bridges)					
Bridges PLUS (Bridges ⁺)	1.80 [0.98, 3.32] ⁺	2.77 [0.84, 9.13] ⁺	2.07 [1.11, 3.87] *	0.92 [-0.31, 2.16]	1.25 [-0.11, 2.61] ⁺
Time (Ref: 1st Intervention Year)					
2nd Year		0.03 [0.01, 0.07] ***	0.06 [0.02, 0.14] ***	-2.57 [-3.38, -1.77] ***	-2.81 [-3.69, -1.93] ***
Group X Time					
Bridges PLUS X 2nd Year		1.13 [0.56, 2.26]	1.01 [0.46, 2.20]	-0.79 [-1.75, 0.17]	-1.04 [-2.10, 0.02] ⁺
Constant	5.20 [3.27, 8.26]	0.72 [0.26, 2.00]	0.51 [0.27, 0.96] *	3.46 [2.43, 4.49] ***	3.78 [2.66, 4.89] ***
Variance of School Random Intercepts	0.38 [0.13, 1.09]	2.37 [1.20, 4.68]	0.48 [0.16, 1.42]	1.05 [0.48, 2.28]	1.26 [0.58, 2.72]
Variance of Child Random Slopes (time)		0.01 [0.00, 8e+12]	2.29 [1.55, 3.37]	6.69 [4.98, 8.99]	8.45 [6.14, 11.63]
Variance of Child Random Intercepts		3.52 [0.57, 21.80]	0.97 [0.38, 2.49]	28.27 [21.43, 37.28]	35.57 [26.62, 47.54]
Covariance of Child Slopes & Intercepts		0.21 [-1.73, 2.16]	-1.16 [-1.96, -0.37]	-13.13 [-17.16, -9.09]	-16.59 [-21.95, -11.22]
Variance of Residuals				4.09 [2.92, 5.74]	5.08 [3.56, 7.24]
Observations	896	1792	1792	1792	1792
N	896	896	896	896	896
Pairwise comparisons					
1st Year: Bridges ⁺ vs. Bridges		2.77 [0.84, 9.13] ⁺	2.07 [1.11, 3.87] *	0.92 [-0.31, 2.16]	1.25 [-0.11, 2.61] ⁺
2nd Year: Bridges ⁺ vs. Bridges		3.13 [0.89, 11.04] ⁺	2.08 [0.65, 6.71]	0.14 [-0.60, 0.87]	0.21 [-0.60, 1.02]
Bridges: 1st Year vs. 2nd Year		0.03 [0.01, 0.07] ***	0.06 [0.02, 0.14] ***	-2.57 [-3.38, -1.77] ***	-2.81 [-3.69, -1.93] ***
Bridges ⁺ : 1st Year vs. 2nd Year		0.03 [0.02, 0.07] ***	0.06 [0.03, 0.10] ***	-3.36 [-3.88, -2.84] ***	-3.85 [-4.44, -3.27] ***

Notes:

⁺ p<0.10;

* p<0.05;

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p<0.001.

d>0.01;
**

The sample of analysis (intent-to-treat sample) includes children in the two intervention arms (both children who did [82 to 90 percent] and did not [10 to 18 percent] open a bank account). Analyses of children who opened a bank account only are included in Appendix Table A1. (All appendices are available at the end of this article as it appears in JPAM online. Go to the publisher's website and use the search engine to locate the article at <http://onlinelibrary.wiley.com>.) The outcome data in this analysis were obtained from children's bank statements. The "Opened an account" outcome has one observation per child, and the other outcomes have two observations (first intervention year and second intervention year) per child.

Table 5

Multilevel regressions for determinants of children's savings.

Outcomes	Never opened an account (mean=0.14)	Low utilization (Made over 2 years; mean=0.58)	High utilization (Made in the 2 nd year; mean=0.11)	Log(monthly savings over 2 years)
Models	Logistic Odds Ratio [95% CI]	Logistic Odds Ratio [95% CI]	Logistic Odds Ratio [95% CI]	Linear Beta-coefficient [95% CI]
Group (Ref: Bridges)				
Bridges PLUS	0.53 [0.29,0.97] [*]	0.41 [0.17,1.01] ⁺	1.88 [0.53,6.63]	0.60 [-0.63,1.83]
Age	1.38 [1.17,1.63] ^{***}	0.97 [0.85,1.11]	1.07 [0.89,1.29]	-0.09 [-0.25,0.07]
Female	1.02 [0.67,1.57]	0.83 [0.56,1.23]	1.75 [0.94,3.24] ⁺	0.04 [-0.30,0.39]
Household size	0.88 [0.71,1.09]	1.02 [0.89,1.17]	0.91 [0.70,1.18]	-0.10 [-0.20, -0.00] [*]
Number of children	1.18 [0.93,1.50]	1.08 [0.91,1.27]	0.86 [0.68,1.10]	0.03 [-0.14,0.21]
Years living in the households	0.98 [0.94,1.02]	0.98 [0.94,1.02]	1.07 [1.01,1.12] [*]	0.08 [0.03,0.13] ^{**}
Double orphan	0.94 [0.50,1.77]	1.12 [0.72,1.73]	0.58 [0.28,1.23]	-0.12 [-0.77,0.53]
Primary caregiver (Ref: Parent)				
Grandparent	1.57 [0.90,2.75]	1.35 [0.94,1.94]	0.71 [0.48,1.05] ⁺	-0.38 [-1.10,0.34]
Other relative	1.34 [0.73,2.49]	1.84 [1.36,2.50] ^{***}	0.70 [0.29,1.69]	-0.41 [-1.03,0.22]
Caregiver: employed	0.88 [0.51,1.53]	0.80 [0.50,1.26]	1.40 [0.77,2.57]	0.51 [-0.05,1.07] ⁺
Constant	0.00 [0.00, 0.04] ^{***}	3.04 [0.44, 21.16]	0.03 [0.00, 0.48] [*]	4.91 [2.93,6.90] ^{***}
Variance of School Random Intercepts	0.35 [0.11, 1.10]	1.09 [0.48, 2.46]	1.99 [0.87, 4.53]	2.43 [1.55, 3.82]
Variance of Residual				9.28 [8.15, 10.55]
N	890	770	770	770

Notes:

⁺ p<0.10;^{*} p<0.05;^{**} p<0.01;^{***} p<0.001.

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Each model includes children in the two intervention arms, and there is one observation per child. The “Never opened an account” model includes children who did and who did not open a bank account. The rest of the analysis (low utilization, high utilization, and total savings) only include children who opened a bank account.

Table 6

Multilevel regressions for material hardship and resources.

Outcomes	Material hardship						Material resources		
	Few sets of clothes(2 or less)	No blanket	No shoes	No meat/fish in past week	Had one meal or less per day	No sugar for tea last week	Owned small business	Asset index (range 1–18)	
Models	Logistic Odds Ratio [95% CI]	Logistic Odds Ratio [95% CI]	Logistic Odds Ratio [95% CI]	Logistic Odds Ratio [95% CI]	Logistic Odds Ratio [95% CI]	Logistic Odds Ratio [95% CI]	Logistic Odds Ratio [95% CI]	Linear Beta-coefficient [95% CI]	
Group (Ref: Control)									
Group $\chi^2(2)$	0.35	3.87	5.22 ⁺	0.21	0.90	1.11	4.65 ⁺	0.72	
Bridges	1.01 [0.50,2.02]	0.58 [0.25,1.34]	0.35 [0.14,0.87] [*]	0.97 [0.54,1.75]	1.31 [0.73,2.37]	0.69 [0.30,1.56]	1.70 [1.05,2.75] [*]	−0.31 [−1.04,0.42]	
Bridges PLUS (Bridges ⁺)	0.85 [0.45,1.58]	1.08 [0.54,2.17]	0.57 [0.25,1.28]	1.09 [0.66,1.80]	1.21 [0.71,2.07]	0.70 [0.33,1.48]	1.56 [0.86,2.15]	−0.17 [−0.77,0.43]	
Time (Ref: Baseline)									
Time $\chi^2(2)$	3.90	19.73 ^{***}	21.59 ^{***}	1.30	6.67 [*]	7.92 [*]	7.14 [*]	4.07	
12 Month (12M)	1.40 [0.84,2.35]	0.72 [0.51,1.02] ⁺	0.38 [0.19,0.76] ^{**}	1.01 [0.64,1.60]	0.71 [0.38,1.30]	0.81 [0.43,1.54]	0.63 [0.45,0.89] ^{**}	0.25 [−0.06,0.56]	
24 Month (24M)	1.03 [0.54,2.00]	0.23 [0.12,0.46] ^{***}	0.08 [0.02,0.28] ^{***}	0.79 [0.50,1.26]	0.47 [0.24,0.92] [*]	0.37 [0.15,0.95] [*]	0.59 [0.36,0.97] [*]	0.29 [−0.01,0.60] ⁺	
Group X Time									
Group X Time $\chi^2(4)$	8.88 ⁺	12.03 [*]	6.65	3.32	13.70 ^{**}	8.02 ⁺	8.72 ⁺	8.69 ⁺	
Bridges X 12M	0.45 [0.21,0.98] [*]	0.56 [0.30,1.05] ⁺	0.67 [0.35,1.28]	0.62 [0.34,1.15]	0.45 [0.21,1.00] [*]	0.54 [0.21,1.36]	1.10 [0.68,1.78]	0.60 [0.13,1.06] [*]	
Bridges ⁺ X 12M	0.57 [0.32,1.04] ⁺	0.54 [0.33,0.87] [*]	0.78 [0.39,1.57]	0.70 [0.43,1.14]	0.82 [0.44,1.53]	1.50 [0.74,3.04]	1.08 [0.70,1.67]	0.37 [0.02,0.72] [*]	
Bridges X 24M	0.46 [0.23,0.91] [*]	0.33 [0.14,0.74] ^{**}	0.95 [0.41,2.20]	0.94 [0.46,1.92]	0.35 [0.19,0.64] ^{***}	0.50 [0.21,1.16]	1.35 [0.74,2.45]	0.53 [0.09,0.98] [*]	
Bridges ⁺ X 24M	0.43 [0.20,0.91] [*]	0.44 [0.20,0.98] [*]	0.37 [0.12,1.12] ⁺	0.86 [0.45,1.64]	0.55 [0.29,1.04] ⁺	0.82 [0.40,1.67]	2.16 [1.17,4.00] [*]	0.39 [−0.02,0.80] ⁺	
Constant	0.07 [0.04, 0.13] ^{***}	0.32 [0.17, 0.61] ^{***}	0.40 [0.17, 0.94] [*]	0.53 [0.35, 0.82] ^{**}	0.15 [0.08, 0.28] ^{***}	0.17 [0.09, 0.30] ^{***}	0.35 [0.24, 0.50] ^{***}	9.47 [8.98,9.96] ^{***}	
Variance of School Random Intercepts	0.29 [0.12, 0.69]	0.62 [0.35, 1.11]	0.77 [0.39, 1.50]	0.37 [0.18, 0.75]	0.18 [0.09, 0.36]	0.55 [0.30, 1.02]	0.19 [0.09, 0.37]	0.49 [0.25, 0.81]	
Variance of Child Random Slopes (time)	0.83 [0.28, 2.48]	1.51 [0.92, 2.50]	1.28 [0.52, 3.18]	0.47 [0.17, 1.27]	0.63 [0.17, 2.30]	1.24 [0.63, 2.44]	0.24 [0.04, 1.40]	0.91 [0.67, 1.23]	
Variance of Child Random Intercepts	3.11 [1.46, 6.63]	3.44 [2.13, 5.56]	3.57 [1.66, 7.68]	1.16 [0.52, 2.61]	0.96 [0.12, 7.43]	3.35 [1.18, 6.25]	1.17 [0.51, 2.66]	5.98 [5.35, 6.69]	
Covariance of Child Slopes & Intercepts	−0.90 [−2.04, 0.24]	−0.16 [−1.07, 0.74]	−0.72 [−2.32, 0.87]	0.13 [−0.38, 0.63]	0.33 [−0.70, 1.37]	−0.60 [−1.63, 0.43]	0.24 [−0.17, 0.65]	−1.02 [−1.29, −0.76]	
Variance of Residuals								3.16 [2.85, 3.50]	
Observations	3925	3924	3925	3925	3925	3924	3925	3925	
N	1383	1383	1383	1383	1383	1383	1383	1383	
Pairwise comparisons									

Outcomes	Material hardship						Material resources	
	Few sets of clothes(2 or less)	No blanket	No shoes	No meat/fish in past week	Had one meal or less per day	No sugar for tea last week	Owned small business	Asset index (range 1–18)
Models	Logistic Odds Ratio [95% CI]	Logistic Odds Ratio [95% CI]	Logistic Odds Ratio [95% CI]	Logistic Odds Ratio [95% CI]	Logistic Odds Ratio [95% CI]	Logistic Odds Ratio [95% CI]	Logistic Odds Ratio [95% CI]	Linear Beta-coefficient [95% CI]
0M Bridges vs. Control	1.01 [0.43, 2.35]	0.58 [0.21, 1.60]	0.35 [0.12, 1.06] [†]	0.97 [0.47, 1.99]	1.31 [0.64, 2.69]	0.69 [0.25, 1.86]	1.70 [0.94, 3.06] [†]	−0.31 [−1.20, 0.58]
0M Bridges [†] vs. Control	0.85 [0.40, 1.81]	1.08 [0.46, 2.53]	0.57 [0.21, 1.53]	1.09 [0.59, 2.01]	1.21 [0.63, 2.33]	0.70 [0.28, 1.74]	1.36 [0.78, 2.37]	−0.17 [−0.90, 0.57]
0M Bridges [†] vs. Bridges	0.84 [0.36, 1.95]	1.85 [0.87, 3.92]	1.62 [0.72, 3.67]	1.12 [0.58, 2.17]	0.93 [0.45, 1.88]	1.02 [0.40, 2.62]	0.80 [0.46, 1.40]	0.15 [−0.63, 0.93]
12M Bridges vs. Control	0.45 [0.17, 1.19]	0.33 [0.12, 0.89] [*]	0.23 [0.08, 0.68]	0.60 [0.28, 1.31]	0.59 [0.27, 1.30]	0.37 [0.12, 1.16]	1.87 [1.05, 3.33] [*]	0.29 [−0.65, 1.22]
12M Bridges [†] vs. Control	0.49 [0.24, 0.97] [*]	0.58 [0.21, 1.61]	0.45 [0.16, 1.24]	0.76 [0.40, 1.45]	1.00 [0.53, 1.89]	1.05 [0.43, 2.55]	1.48 [0.77, 2.85]	0.20 [−0.51, 0.91]
12M Bridges [†] vs. Bridges	1.07 [0.47, 2.42]	1.78 [0.79, 4.04]	1.91 [0.80, 4.58]	1.26 [0.62, 2.55]	1.69 [0.82, 3.46]	2.85 [1.06, 7.64] [*]	0.79 [0.44, 1.40]	−0.09 [−0.86, 0.69]
24M Bridges vs. Control	0.46 [0.20, 1.03] [†]	0.19 [0.06, 0.64] ^{**}	0.33 [0.10, 1.06] [†]	0.91 [0.30, 2.79]	0.46 [0.23, 0.94] [*]	0.34 [0.12, 0.97] [*]	2.28 [1.05, 4.95] [*]	0.22 [−0.52, 0.96]
24M Bridges [†] vs. Control	0.36 [0.15, 0.85] [*]	0.48 [0.15, 1.47]	0.21 [0.05, 0.87] [*]	0.94 [0.39, 2.26]	0.66 [0.35, 1.24]	0.57 [0.23, 1.40]	2.95 [1.38, 6.29] ^{**}	0.22 [−0.44, 0.89]
24M Bridges [†] vs. Bridges	0.79 [0.35, 1.77]	2.51 [0.89, 7.07] [†]	0.63 [0.20, 1.94]	1.03 [0.38, 2.82]	1.44 [0.74, 2.83]	1.68 [0.64, 4.41]	1.29 [0.66, 2.54]	0.00 [−0.65, 0.65]
Control 12M vs. 0M	1.40 [0.75, 2.64]	0.72 [0.47, 1.10]	0.38 [0.16, 0.89] [*]	1.01 [0.58, 1.77]	0.71 [0.33, 1.49]	0.81 [0.37, 1.77]	0.63 [0.42, 0.95] [*]	0.25 [−0.12, 0.62]
Control 24M vs. 0M	1.03 [0.46, 2.30]	0.23 [0.10, 0.53] ^{***}	0.08 [0.02, 0.36] ^{***}	0.79 [0.45, 1.39]	0.47 [0.21, 1.06] [†]	0.37 [0.12, 1.16]	0.59 [0.32, 1.08]	0.29 [−0.08, 0.66]
Control 24M vs. 12M	0.74 [0.45, 1.20]	0.32 [0.17, 0.60] ^{***}	0.20 [0.09, 0.47] ^{***}	0.78 [0.44, 1.40]	0.67 [0.43, 1.05] [†]	0.46 [0.24, 0.89] [*]	0.93 [0.62, 1.41]	0.04 [−0.32, 0.40]
Bridges 12M vs. 0M	0.63 [0.24, 1.67]	0.40 [0.20, 0.81] ^{**}	0.25 [0.12, 0.52] ^{***}	0.63 [0.36, 1.11]	0.32 [0.13, 0.79] ^{***}	0.44 [0.16, 1.22]	0.70 [0.45, 1.07]	0.85 [0.43, 1.27] ^{***}
Bridges 24M vs. 0M	0.47 [0.15, 1.51]	0.07 [0.03, 0.22] ^{***}	0.07 [0.02, 0.31] ^{***}	0.74 [0.35, 1.59]	0.17 [0.07, 0.41] ^{***}	0.18 [0.06, 0.58] ^{**}	0.80 [0.48, 1.33]	0.83 [0.43, 1.23] ^{***}
Bridges 24M vs. 12M	0.74 [0.30, 1.85]	0.19 [0.09, 0.41] ^{***}	0.29 [0.10, 0.84] [*]	1.18 [0.71, 1.96]	0.52 [0.21, 1.29]	0.42 [0.18, 1.02] [†]	1.14 [0.74, 1.75]	−0.02 [−0.46, 0.42]
Bridges [†] 12M vs. 0M	0.80 [0.39, 1.66]	0.39 [0.24, 0.63] ^{***}	0.30 [0.14, 0.63] ^{***}	0.71 [0.53, 0.95] [*]	0.58 [0.30, 1.12]	1.22 [0.66, 2.24]	0.69 [0.46, 1.03] [†]	0.62 [0.41, 0.82] ^{***}
Bridges [†] 24M vs. 0M	0.44 [0.13, 1.50]	0.10 [0.04, 0.28] ^{***}	0.03 [0.00, 0.18] ^{***}	0.68 [0.37, 1.25]	0.26 [0.10, 0.69] ^{***}	0.30 [0.13, 0.73] ^{***}	1.28 [0.72, 2.26]	0.68 [0.34, 1.03] ^{***}
Bridges [†] 24M vs. 12M	0.55 [0.24, 1.26]	0.26 [0.10, 0.66] ^{**}	0.10 [0.02, 0.42] ^{**}	0.96 [0.50, 1.86]	0.44 [0.22, 0.90] [*]	0.25 [0.12, 0.53] ^{***}	1.86 [1.21, 2.86] ^{**}	0.07 [−0.18, 0.31]

Notes:

[†] p<0.10;

^{*} p<0.05;

^{**} p<0.01;

^{***} p<0.001.

The sample of analysis includes at most three observations from each child in the three study arms.