Loose Knots:
Strong versus Weak Commitments to Save for Education in Uganda[*]

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Abstract:
Commitment devices offer an opportunity to restrict future choices. However, strict commitments may deter participation. Using a school-based commitment savings program for children to save for educational expenses in Uganda, we compare an account fully committed to school expenses to an account with a weaker commitment (funds withdrawn in cash, rather than a voucher). Children save more in the weaker commitment treatment arm, and when combined with parental outreach spend more on educational supplies and score 0.10 standard deviations (standard error =0.04) on test scores. The fully committed account yields no such educational improvements, and neither account finds impacts on secondary or downstream outcomes such as attendance, enrollment, or non-cognitive skills.

JEL Codes: D12, D91, I21, O12
Key Words: Commitment Savings, Micro-Savings, Educational Resources, School Participation

"Make it easy" – Richard Thaler, co-author of *Nudge: Improving Decisions about Health, Wealth, and Happiness* (Clement 2013)

I. Introduction

A commitment device offers empowerment through restraint. Through such devices, a commitment-maker exercises their agency up-front in order to limit their range of future choices. In self-aware moments, individuals may choose to adopt these restrictions to resist future temptation or fend off social or filial pressures that are at odds with the commitment maker's goals. Indeed, prior research finds demand for commitment savings accounts that restrict access to one's money in order to help with self-control issues (Ashraf, Karlan, and Yin 2006; Brune et al. 2016; Dupas and Robinson 2013; Giné et al. 2018), and other research finds demand for commitment devices in other domains.

This project began after qualitative research on household finance in Uganda identified saving for school fees and supply costs as a key barrier for families.[1] We tackle three primary questions within the context of an educational savings intervention. First, a program evaluation question: can a commitment savings program that encourages students to save improve student performance through increased educational expenditures? We discuss below but note this program offers not only a commitment savings account but also weekly opportunities to deposit following class discussions. Second, will the commitment savings account work better with a strict rule on how the accumulated funds are spent or a flexible rule? And third, does the savings-oriented commitment device change actual educational expenditures or instead does it get unwound through off-setting behavior?

The specifics of what one means by "commitment" on a commitment savings account varies considerably, and may generate correspondingly varied impacts on account opening, total deposits, total withdrawals, and perhaps most importantly ultimate expenditure and investment decisions. The commitment versus flexibility tradeoff exists across many points in the savings and spending process (see Amador, Werning, and Angeletos (2006) for a theoretical analysis of the overall tradeoff between commitment and flexibility). In developing countries with respect to savings, Dupas and Robinson (2013) shows that soft savings commitment substantially induces people to invest in preventative health as compared to control. Duflo, Kremer, and Robinson (2011) finds hard commitments to save increased investment in fertilizers (specifically the hard commitment was in the form of a coupon to buy fertilizer). Steinert et al. (2022) tests two levels of soft commitment, and finds that a lockbox accompanied by a zip purse performed better than merely a lockbox (and the effects came from increased concealed resources from spouses rather than reduced temptation spending). In the United States, prior work has tested the impact of soft commitments as compared to hard commitments: Burke, Luoto, and Perez-Arce (2017)

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[1] The initial role for the qualitative work was to collaborate with an insurance company and identify missing insurance products. Although the insurance work did not proceed, the dominance of low savings for school in the focus groups led the researchers to this project.

finds a hard commitment that restricted withdrawals to be more effective in increasing savings balances than soft commitments (non-binding pledge and a planning exercise). Similarly, Beshears et al. (2020) finds that stronger commitment accounts (testing across several levels) that had the harshest level of early withdrawal penalty attracted more deposits.[2]

Given the challenge in categorizing product features into simplistic "soft" and "hard", and the changes in context (health to agriculture to savings, e.g.), it is difficult drawing generalized claims about "soft" versus "hard" commitments. The lessons, we believe, will need to be more granular, i.e., focused on specific dimensions or features that have implications to the categorization into soft and hard.

In that spirit, we focus on one key dimension: whether the funds deposited are locked in for a specific "good" expenditure, or if individuals have freedom to spend withdrawals as they wish in a setting in which the "good" item is made easily available.[3] We define "hard" as one which locks spending in for specific purposes and "soft" as one which is labelled as such but not locked into such expenditures. In a similar Dupas and Robinson (2013) study, participants believed their lockboxes had to be spent on health, even though they did not; in this sense however we believe it is accurate to equate their health lockbox to the soft commitment account in our context, since similarly there was no requirement to spend it as such but that is how people used the funds.

In theory the tradeoffs are clear: a strong commitment device may be more effective in enforcing the behavior of the future self, but the current self may be less likely to participate in the contract at all. An individual may want to commit in some, but not all, future states of the world, since emergencies do happen. The challenge is designing a contract in which a third party has the right level of enforcement discretion. This tension is highlighted in related work by John (2020), which argues that penalties for failing to complete commitments may be too weak for a certain range of the naïve, because the unfortunate case occurs too often (punishment for failure to complete the contract). If an individual cannot trust any third parties with that discretion, a self-enforcing commitment contract may work instead. In such a contract, the increased price of vice is derived from psychic costs, i.e., disappointment with oneself and one's lack of adherence to a plan. This is akin to a model put forward by Benabou and Tirole (2004) on how personal rules can shift later

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[2] Naturally the soft vs. hard commitment tradeoff is relevant in other non-savings domains too, although few papers explicitly test variation on this dimension. Two exceptions: Spika et al. (2023) finds a hard commitment to exercise works considerably better than a soft commitment; Bettega et al. (2023) finds a hard commitment to limit gambling online leads to slightly less risk taking than a soft commitment.

[3] Clearly in a perfect market, specifically one with zero transaction costs, this would make no difference: any items purchased with the locked-in commitment account could simply be sold in exchange for the most desirable item for the same value. In our market, supplies and services associated with primary education in Uganda, there are significant enough transaction costs to make such an exchange quite costly, and thus the original expenditure sticky.

behavior, and also could be construed as a test of whether "mental accounting" can be a policy instrument that induces behavior change (Shefrin and Thaler 1992).

Our third question examines whether commitment devices get unwound through offsetting behavior (Karlan, Ratan, and Zinman 2014). More money spent from a commitment account for a particular purpose may simply crowd-out spending for that same purpose with funds from other sources. By examining how actual expenditures change for the particular purpose, rather than merely observing whether savings increases, we are able to make stronger statements about welfare outcomes, similar to Ashraf et al (2010) with respect to household durable goods purchases and Dupas and Robinson (2013) with respect to health investments.

We examine these questions in the context of a school-based commitment savings account in Uganda. Specifically, we test whether a stronger versus a weaker savings commitment device helps children and their families save more, spend more on educational expenses, and achieve higher test scores. Relative to the economics of education literature, we thus gain a better understanding of the education production process (Kremer and Holla 2009), building on a growing body of evidence demonstrating the possibly significant effects of basic school supplies – notebooks, uniforms, workbooks, etc. – on student performance (Das et al. 2013; Hidalgo et al. 2013) and parental involvement (Avvisati et al. 2013). Second, the results build on existing evidence of the importance of savings constraints for educational expenses (Barrera-Osorio et al. 2011) as well as mechanisms for tying resources to educational expenses (De Arcangelis et al. 2015).[4]

We evaluate the intervention ("Supersavers") as follows: working with a local nonprofit organization Private Education Development Network (PEDN) in the Busoga sub-region of the Eastern region of Uganda, and Innovations for Poverty Action (IPA), we randomly assigned 136 primary schools to one of three groups: a strong commitment savings account (funds could be withdrawn no earlier than the end of the term, and had to be spent on educational items through a voucher that we provided), a weak commitment savings account (funds could be withdrawn no earlier than the end of the term, but were available in cash, to be spent as individuals wished)[5], or control. For both treatments, students could deposit cash into an account. At the end of each trimester they were able to use their cash or vouchers to purchase school supplies at a fair.[6] Note that control schools did not receive a fair. Thus analysis of "any treatment" includes bundling the fairs as part of the treatment.

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[4] It is interesting to note that, while we find that relaxing savings constraints improves educational outcomes, we find improvements in academic performance rather than participation. This contradicts the results of Barrera-Osorio et al. (2011) which finds that distributing funds at the time that families have to pay enrollment expenses improves enrollment rates. The difference may, in part, be due to the fact that unlike Uganda, Colombian schools still charged official fees for enrollment.

[5] The weak commitment treatment arm is thus most similar to the SEED account in Ashraf et al (2006), i.e., a commitment merely to not withdraw funds until a certain future point in time.
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However, we observe no positive treatment effect on school supplies for the voucher treatment arm compared to control, so we conclude that the fairs themselves did not have an observable direct treatment effect since their path to impact would we believe have been through the path of higher school supplies expenditures. We thus compare a stricter commitment device and a weaker "make it easy" nudge of individuals towards a specific behavior (Thaler and Sunstein 2009). Although the accounts were described as the students' accounts, we cannot rule out that some of the funds were considered parental funds and managed as such by the family.[7] We developed a brief teacher training component and also coordinated the transfer of money from a savings box held at the school to a local bank for safekeeping. One year into the implementation, we implemented one sub-treatment in half of the treatment schools, a parental involvement workshop.

The first stage is critical and revealing: students deposit significantly more money into the soft commitment savings account than the hard commitment savings account. And, for those with the parental outreach sub-treatment, the additional money deposited into the account leads to higher investment in school supplies, which then in turn leads to higher test scores. We find a 0.10 standard deviation (se=0.04, 95%CI=[0.02, 0.18]) improvement in overall scores; this includes effects on each of the covered subjects: grammar (0.13 standard deviations, se=0.04, 95%CI =[0.05,0.21]), reading (0.11 standard deviations, se=0.05, 95% CI=[0.01,0.21]), and math (0.01 standard deviation, se=0.05, 95%CI=[-0.09, 0.11]). The implication for the school production function is simple: for a student to learn basic skills, having a pen, paper, and workbook matters. Furthermore, the treatment effect on educational outcomes is sizable, as large as many direct educational interventions, and consistent with other estimates of the effects of such supplies (Das et al. 2013) We find no statistically significant effect on student participation (either attendance or enrollment) or on a set of non-cognitive outcomes.

One critical gap we leave in our understanding of the underlying mechanics: whose money went into the accounts, the child's or the parent's? About half of our participating students reports engaging in some work and saving some from the money earned from work. This question muddles the ability to assert that the children (versus the parents) had time inconsistent preferences or if, on the other hand, the account shifted power across individuals with different preferences within the household. This is true, of course, in most studies on savings of individuals who live within a household. For example, in a typical "commitment savings" account test (e.g., see Ashraf, Karlan, and Yin 2006; Dupas and Robinson 2013; Brune et al. 2016), accounts are offered to individuals, and outcomes tracked at some combination of individual and household. Yet given fungibility of money within the household, it is difficult if not impossible to assert the source of the deposited funds. Because of the power dynamics between parent and child, there is a particular

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[7] As we show below, both the children and other family members contribute to the accounts, raising the possibility that multiple household mechanisms are involved.

poignancy to this gap in our setting, yet the gap exists for any study of a savings intervention which targets individuals which live within a household of multiple adults.

II. Background

A. Ugandan Primary Education System

Uganda abolished most primary school fees in 1997.[8] In the same year, the gross primary enrollment rate[9] ballooned from 87 percent in the early 1990s, to 123 percent in 1997. Between 1996 and 1997, 2.3 million children enrolled in primary school, increasing total enrollment to 5.7 million (Murphy, Bertoncino, and Wang 2002).

Unfortunately, while most children now enroll in primary school, the majority fail to graduate. In 2008, for example, the gross enrollment rate[10] in lower secondary was 33 percent– 11 percentage points below the average for Sub-Saharan Africa (UNESCO 2013). The transition from primary to secondary is a challenge, as in many countries. However, the majority do not complete primary school. As of 2010, only 32 percent of students entering primary school completed the seventh grade (UNESCO 2012).

While the poor quality of primary education is a likely factor (Piper 2010),[11] students still face financial barriers. While students no longer pay enrollment fees, they do face other expenses. Many schools require uniforms, and families are responsible for providing food and school supplies, such as paper, writing instruments, and workbooks. See Appendix Table 1 for a summary of educational fees and expenses expected of households. With the approval of the parent-teacher association and school management committee, schools can also charge fees for ancillary services such as supplementary lessons, practice exams and feeding programs. Official policy prohibits preventing a child from enrolling due to an inability to pay, but the majority of dropouts cite financial concerns. In our baseline survey described below, families paid an average of 5,790 UGX (2.30 USD) to send a child to school for a year, 0.5 percent of Uganda's per capita income in 2010 (UN data 2013).

Confusion and suspicion create additional complications. As we discovered through qualitative interviews and feedback from parents, politicians try to drum up support by claiming school fees are illegal. The terms "universal" and "free" education are sometimes used interchangeably. Many parents do not understand the official financing rules. Some

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[8] Initially, up to four children per family could attend school without paying tuition fees (Murphy, Bertoncino, and Wang 2002).

[9] The gross primary school enrollment ratio is the ratio of the number of enrolled primary school children, regardless of age, to the total number of primary school-aged children in the population.

[10] The gross enrollment rate for lower secondary school is the ratio of the number of children enrolled in lower secondary school regardless of age relative to the total number of children in the population who are of age to attend secondary school.

[11] The dramatic increases in enrollment have strained existing resources. In the average school in 2005, three children had to share the same textbook and 94 children crammed into a single classroom (Independent Evaluation Group (IEG) 2007).

believe that the government should provide for all school related expenses. Finally, rumors of corruption can make even knowledgeable parents reluctant to pay.

B. Description of the Intervention

To facilitate families' and children's saving for school, we evaluated four variations of a school-based savings program. The intervention had two primary objectives. First, it sought to facilitate and encourage the practice of children saving for education, and through saving, improve overall academic performance and support students' continued enrollment. The program targeted students in grades five, six and seven, i.e. the last three years of primary school, in order to target students at high risk for dropping out of school.[12] Note that Uganda follows a 7+2+2 grade structure. Students attend primary school for seven years followed by two years each of lower and then upper secondary school. At baseline, the mean student age was 12 (sd dev = 1.52).

We developed and implemented the programs in partnership with the Private Education Development Network (PEDN). PEDN is a Ugandan non-profit organization focusing on youth financial and entrepreneurial education. PEDN comprises five full and part time employees, often supplemented by project specific staff hired as needed. For the savings programs, IPA worked with PEDN to hire a local implementation team of about 10 people.[13]

Each treatment variation included the same core component: a savings account administered through the school, and a program to support and encourage children to use the accounts. During an introductory meeting, the implementation team described the program to a joint meeting of the Parent Teacher Associate, the School Management Committee, and other interested parents. If they all voted to participate, we provided each school with metal lock boxes. A designated teacher assisted by student-elected[14] representatives from each class then managed the program. The implementation team conducted weekly visits to each school to encourage saving and to assist with accounting procedures. Interested students received a passbook in which their individual savings were recorded, and the designated teacher and the implementation team maintained an official register. Depending on a school's preference, students then deposited money into the lockboxes on a daily or weekly basis.

To provide security and transparency, two padlocks secured each box. Parents elected a representative to keep the key to one lock, while the bank held the other. At the end of each

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[13] This includes only those individuals hired to implement the described programs. It does not include the research staff who conducted the surveys and monitoring visits described below.

[14] The Ugandan educational system classifies children enrolled in primary school as "pupils" and those in secondary school as "students". In this article, we refer to all enrolled children as students.

trimester,[15] the two key holders opened the box. The bank representative provided a deposit slip and deposited the funds into the school's account.[16] The accounts did not earn interest. Inflation varied but averaged around 10% per year in this time period, thus the accounts had a negative real interest rate. After the break between trimesters, the implementation team and bank representatives returned to the school for the payout of the funds. Two representatives signed a withdrawal slip to confirm the withdrawal. The designated teacher, student representatives and our team then distributed the money according to the savings register. At the same time, the implementation team organized a small market at each school where students could purchase school supplies or school services such as practice exams or tutoring sessions (most of the funds went to school supplies, although detailed data are unfortunately not available).[17]

Thus, in net, treatment effects from the program (irrespective of variations discussed in a moment) compared to control schools could be a result of several factors. The commitment device is motivated by theories about time inconsistent preferences, but the weekly meetings also serve as a mere reminder to save. Reminders have been shown to generate higher savings, albeit on a sample of adults (Karlan et al. 2016). The meetings also were, in theory, informative, specifically teaching lessons about the importance of savings. In an evaluation of an in-school program to promote savings in Ghana, based on a program by Aflatoun, school children saved more in school but no downstream effects materialized on attitudes, aggregate savings, or education outcomes (Berry, Karlan, and Pradhan 2018). One study is of course not dispositive, particularly given this is a different curriculum and setting, and thus it is important to note that the program could be shifting behavior due to the commitment aspect, attention, or information/signaling mechanisms.

On top of the core treatment above, there were four treatment variations, a 2x2 design: "cash" or "voucher" for the withdrawals, and "Parent Outreach" or "No Parent Outreach".

For the cash treatment arm, students received, in cash, their savings from one trimester at the beginning of the next trimester. They could then spend the funds at their discretion— at the markets provided on the disbursement day (thus "making it easy" to spend on school supplies) or elsewhere. The voucher treatment arm, on the other hand, employed a stronger commitment — students had to buy educational products or services at the market, on the

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[15] The academic year starts in February and follows a trimester system. Schools run for 12 weeks at a time. Students receive a three week break after the first and second terms, and schools are closed in December, January and February.

[16] Working with the bank, FINCA Uganda, we designed an account for the intervention modeled on a traditional group savings account. We also provided the minimum 5,000 UGX deposit and worked with the school's elected signatories to obtain the documentation required to open the accounts.

[17] Students were allowed to rollover vouchers to future terms, and upon completion of the final year (P7), were allowed to withdraw any remaining balance in cash.

disbursement day.[18] In both variants, children could also re-deposit their savings for the next trimester.

The Parent Outreach component was implemented halfway through the program as an adaptation based on qualitative feedback from teachers and schools. Specifically, there was demand from parents for more information about the program as well as incorrect beliefs being reported back to us via schools. Due to the potential importance and the relatively low cost of parent outreach, we randomized this component, implementing it for half of the treatment schools. The implementation team hosted a meeting for sixth and seventh grade parents. The meetings began by identifying the various stakeholders in primary education, their roles and responsibilities. PEDN then discussed the various ways in which parents could support their children's education. In particular, PEDN explained that in addition to providing a student learning experience, the savings program provided an opportunity for the household. It could be a tool to help families finance their children's education. A snack and soda were provided to encourage attendance.

III. Design of the Evaluation

A.   Research Design

Figure 1 depicts the timeline for the randomized controlled trial and data collection. We selected 136 primary schools from the Jinja, Iganga, Mayuge, and Luuka districts of the Busoga Region because they predominantly comprised poor rural and peri-urban schools. We then administered a baseline survey and test during the final trimester of 2009. We then randomly assigned schools to receive either the cash treatment (39 schools), voucher treatment (39 schools), or no treatment (58 schools), stratifying by the total normalized score on the baseline exam and by geographic regions called sub-counties.[19]

Following the first randomization, school outreach began. It took two trimesters to recruit the majority of schools, but by the beginning of the third trimester of 2010, 95 percent of

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[18] Early in the intervention there was concern that the teachers and community members mobilized to manage the supplies fair were marking up prices to take advantage of the situation. To avoid this, the supplies markets were taken over as part of the intervention. In collaboration with a wholesale distributer, prices were set to match typical market prices available to students, and the fairs were organized by the implementing NGOs directly. Managing the fairs as part of the intervention also ensured the essentials supplies were there. This does have implications for scale-up attempts, i.e., whether through explicit management or alternative approach, one likely needs to have a competitive market for supplies available for the students. From the success and volume of sales in the weak-commitment treatment arm, we infer that the mix of products was sufficiently diverse and pricing appropriate that lack of engagement in the strong-commitment treatment arm was not due to lack of trust or the wrong product mix, particularly given the repeat nature of the process.

[19] In 2010, Uganda included four major jurisdictions called "regions." Spread across the four regions, were 111 "districts." Each district was divided into urban areas known as "municipalities" or rural areas called "counties." Counties were further sub-divided into sub-counties. Depending on the population, a district could have as few as three or as many as thirty or more sub-counties.

the treatment schools had agreed to participate (77 joined, 1 refused).[20] The school that refused to participate did, however, permit data collection, and is thus included for all analysis in the treatment group.

In 2011, we conducted a second randomization for the parent sensitization program. To isolate the effect of the program while still treating all of the schools, we assigned schools either to the Parent Outreach group who received the intervention in the first trimester of 2011 or to the No Parent Outreach group who received the intervention too late to affect student behavior – immediately before the follow-up survey in second trimester. Half of the schools in each treatment were assigned to each group. We stratified assignment by the schools' initial treatment group and sub-county, and checked for balance using the demeaned savings rates from 2010.

Finally, we conducted the follow-up survey and tests during the beginning of the third trimester of 2011.[21]

B. Data

Appendix Table 2 presents the specifics (year of survey, year of student, sample size) of the three datasets created.

We utilize two samples of students, as well as data at the classroom level. The "Attendance Survey" includes all students present in class at baseline and then tracks their attendance in subsequent rounds of data.

Second, we created a representative, longitudinal sample of students identified prior to treatment assignment (the "Student Survey"). These students were tracked regardless of whether or not they continued to be enrolled in the original schools.

The classroom-level data included all classes in grades five, six, and seven. Enumerators counted the number of children present, enrolled and possessing notebooks, math set, uniform, or shoes.[22,23] We conducted these monitoring visits prior to the randomization as part of the baseline and at least once a trimester after the randomization.

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[20] When they were not canceled, meetings had to be held with school administrators, the school management committee, and the parent-teacher association for each school. Many were initially reluctant to hold additional meetings.

[21] In 2012, we conducted a second, smaller experiment in which we randomly assigned a fraction of the original control group to receive the cash with sensitization program. We also collected the classroom-level data described below. However, the remaining control group proved too small. The point estimates are consistent with those presented here, but the standard errors are too large to provide meaningful information. These results are available upon request.

[22] The enumerator only counted a student as having each item if the enumerator could see it.

[23] Notebooks cost approximately 200 UGX (0.08 $USD) each. In Uganda, they are usually called "exercise books." A math set costs approximately 1,000 UGX (0.40 $USD) and includes such tools as a ruler, protractor and compass. Uniform and shoes each cost about 6,000 UGX. (2.39 $USD) They are a traditional school requirement.

The Student Survey includes 4,716 students who completed a baseline survey and aptitude test prior to the randomization. To identify the students for the second (longitudinal) student sample, we compiled a list of all students of the correct ages and grades in September of 2009 (P4 and P5, so that this constituted the students who would be in P5 and P6 for the start of the study).[24] Teachers then classified each student using a five-point scale to rate frequency of attendance. In particular, this allowed us to identify students on the rosters who did not attend school. From the set of attending children, we randomly selected 35 students from each school, except for two schools in which we included all students because fewer than 35 students had enrolled.

The baseline survey completed by the students in the longitudinal sample was a 40 minute survey that included questions about their education history, experiences with saving, time preferences, and demographic information. Students also completed an hour-long, 35-question exam covering math, grammar, and reading comprehension. Students in each grade took separate exams based on the national curriculum for their grade.[25]

Students completed an follow-up survey about two years after the baseline survey. The 40 minute survey included questions about saving behavior, possession of resources like those in the class-level survey, such as uniforms, books, math sets, and shoes.

Tests were conducted at the same time as the baseline and follow-up surveys, for grammar, reading and math. Tests were about one hour long.[26] We developed these tests ourselves, and aimed for them to mimic other exams they take in school. We piloted the tests to make sure we did not observe large modes at either the high or low extreme, and all analysis standardizes scores by subject relative to the contemporaneous control group.

We attempted to survey all students regardless of their enrollment status at the two-year follow-up, and successfully surveyed 3,832 of the original respondents.

Finally, we verified the presence of each student in the longitudinal sample during each class-level monitoring visit. This provided an objective measure of students' attendance rates as well as whether students were still enrolled in school in the appropriate grade.

Unfortunately, we lack two datasets which would have been fruitful, but were not feasible to collect: individual level savings data, and specific purchase decisions from the fairs in which school supplies were sold.

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[24] For a small number of classes, rosters were unavailable. We had to create a list of students based on the students present in class and information provided by the teacher.

[25] For both the baseline and follow-up exams, all scores are normalized within grade and subject relative to the contemporaneous control distribution.

[26] See Appendix for the exact questions used in the tests.

C. Orthogonality of Treatment Assignment and Attrition

In Table 1, we verify the effectiveness of the randomization in creating observably similar treatment and control groups on average. Each row presents estimates for the indicated baseline characteristic. Columns 1-3 provide the sample size for each variable,[27] the pooled treatment mean and standard deviation, and the control mean and standard deviation. Column 4 provides the regression estimates of the difference between the combined treatment group and control group, while Columns 5-8 provide regression estimates of the difference between each treatment group and the control group. All differences are estimated using equation (1) below, controlling for the sub-counties in which the schools were stratified.

Overall, the differences are minimal, i.e., the assignment to each treatment is orthogonal to a series of baseline variables. Of the 83 estimates presented, nine are statistically significant: one at the one-percent level, five at the five percent level, and three at the ten percent level. The overall joint test of significance presented in the bottom row is not significant for any treatment group. Most importantly, the magnitudes of the estimated differences are also all relatively small. Regardless, the main specification includes control for baseline value of the outcome variables as well as test scores. In the appendix we then repeat the main tables without these additional controls, and results are qualitatively similar, suggesting that any imbalance at baseline was due to measurement error.

Table 2 analyzes attrition. First, Row 1 presents the basic test for whether treatment led to differential attrition rates overall. Columns 2 and 3 show that we have similar survey completion rates in treatment and control (82 and 81 percent), and Row 1 Columns 5-8 report no differences in attrition rates across the four treatment groups. However, even though the overall attrition rate is not affected by assignment to treatment, differential attrition could result in differences in the analysis sample frame (i.e., those who complete the follow-up survey, or take the follow-up exams). To test for this, we replicate Table 1 analysis on various baseline measures (rows 2 onward). The table is organized similarly to Table 1 (except that the classroom variables are omitted, since there is no attrition at the classroom level). Overall, we find no evidence of compositional effects from differential attrition. Only six tests are statistically significant (out of 66, and the only differences from Table 1 are the estimates for days missed per school term and the time preference measures.

IV. Results

Since the random assignment should ensure the orthogonality of treatment assignment and other student characteristics, our primary specification estimates the treatment effects via ordinary least squares using the following specification:

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[27] Sample sizes vary because subjects refused to respond to some questions.

$$Y_{ijk} = \alpha + \tau \text{'}treat_j + \delta \text{'}X_{ijk} + \varepsilon_{ijk}. \tag{1}$$

The variable Y_{ijk} is the dependent variable of interest. We perform estimates at the student and class level. The index i then represents either the student or class in school j and sub-county k. The vector $treat_j$ is a vector of indicator variables for each treatment, and X_{ijk} is a vector of control variables. For each estimate, we control for baseline test scores in math, reading, and grammar; sub-county fixed effects; and, the baseline value of the outcome if available. We cluster standard errors by the unit of randomization, the school.

The experimental design was registered in the American Economic Association registry in January 2014, slightly more than two years after the end of the experiment (the AEA registry did not begin until 2013). As such, we have no prespecified specification to prioritize. Given that, we choose to present the most disaggregated specification of each of the four treatment arms without pooling as our core specification, but also show the p-values for each of the sub-treatment variations (cash versus voucher; parental outreach vs no parental outreach).

First, we assess students' savings behavior. In Table 3, we provide two measures of total program savings over the two years: the total per school and per student (using three measures of the latter). Columns 1-4 provide the average for each research group. Focusing on the 2011 results, and with a less restrictive measure of the student body (attendance at any point during the two-year study period), the two cash payout treatment groups produce average per student savings of 3,604 UGX and 2913 UGX in the parent outreach and no parent outreach groups, respectively. Using average attendance, these results approximately double to 4,411 and 3,672, respectively. In comparison, the two voucher treatments, with and without parent outreach, show average savings of 1,262 UGX and 1,511 UGX with a less restrictive measure of attendance; and 1,595 UGX and 1,772 UGX using average attendance. The differences between cash and voucher are statistically significant at the 1% level for average deposits per school and at the 5% level for average deposits per student for both measures of attendance (Column 5). On the other hand, the differences between parent and no parent outreach are not statistically significantly different from zero (Column 6). The results for 2010 (Panel A) are similar, albeit with smaller magnitudes.

We draw three conclusions from the savings data. First, the more restrictive savings vehicle, the voucher treatment, generated significantly less savings than the less restrictive cash treatment. Second, for those in either of the savings treatment groups, we find no additional effect of the parent outreach on savings (and the parental outreach treatment was only implemented within the treatment groups, not within the control group, thus we can estimate its treatment effect in an environment with the savings treatments). This supports the upcoming evidence that while the cash treatment arm led to higher savings, the parent outreach component shifted *how* the funds were spent.

Table 4 examines other key process and intermediate outcomes. First, in Panel A, we examine further savings outcomes as reported by students in the follow-up survey. We find that 79 percent of treatment students and only 11 percent of control students were familiar with the Supersavers program. Similarly, 44 percent of treatment group students and only 3 percent of control group students reported saving with Supersavers. There was little difference in program awareness or self-reported participation on the extensive margin across treatment groups. This thus supports the argument that the difference in outcomes is not due to differential marketing or promotion of the program, or differential compliance to experimental protocols, but rather to the attractiveness of the cash versus voucher condition and the parent outreach. We also observe an increase in self-reported in-school savings, but a larger reduction in self-reported out-of-school savings (large enough to lead to a negative impact on total reported savings, whether winsorized or not). We do not understand the negative estimate for total impact and posit that this could be a measurement or reporting issue or could be a by-product of different patterns of depositing and withdrawing into home versus school savings vehicles. The question asks about flow (albeit vaguely). Savings at school were not available for withdrawal, hence money deposited remained on deposit until the end of term. Savings at non-school vehicles likely could be withdrawn frequently, rotating funds in and out for petty trade, for instance. The ideal would have been to have a record of the average daily balance, but we do not do that, and in reflection we are not sure we would have been able to elicit this without considerable measurement error (particularly given time constraints of the survey)."

Next we examine process and attitude questions about savings, with particular attention on the parental outreach sub-treatment. Starting with savings attitudes, we do not observe changes in an index of seven questions.[28] This may have implications for long-term change in saving behavior, if one posits that these attitudinal shifts are a necessary component for long-term behavior change, after the active involvement from the NGO and savings program. Alternatively, the measures may be flawed, or the attitudinal changes may be unnecessary; the learned pattern of savings may be possible to change without changing underlying savings attitudes (similar to one interpretation of the five-year financial education results in Horn et al. (2023)).

Continuing to try to unpack the source of savings changes, we examine a series of self-reported outcomes regarding source of funds and location of savings. We find a statistically significant but fairly small in magnitude increase in "Any Funds Saved Came from Parents for the Purpose of Saving" (from 2% to 5%, with similar shift across all four treatment

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[28] Savings Attitude Index includes 7 statements each of which the student evaluated on a Likert scale, 1-5. All scales were converted after the fact so that higher on the scale meant more positive attitude toward saving. (1) Saving money is not necessary if you live at home with your family. (2) Saving is a good thing to do. (3) Saving is for adults only. (4) My parents or relatives would be proud of me for saving. (5) Managing to save makes me feel happy with myself. (6) It's better to spend money today than to save it for use in the future. (7) Every time I get money I put away some money for saving. Appendix Table 4b presents the results for each of the components in this index.

arms) and similarly for number of locations of savings (0.79 to 0.86). Furthermore, we find no difference in savings behavior for those in the parental outreach sub-treatment, thus reinforcing the mechanism interpretation that the parental outreach worked by shifting *how* saved funds got spent but did not shift by much the source or quantity of the savings.

In Panel B and C, we then examine intermediate outcomes, i.e., the possession of school supplies (measured both during classroom visits as well as in the follow-up survey[29]), parental involvement, and payment of school fees. Analysis of these questions aim to further help understand the mechanism through which the program worked. We present the results for each, but only find an impact on the possession of school supplies and whether students spent savings on school supplies, suggesting that the other mechanisms are not responsible for the observed impacts, or are poorly measured.

As an indicator of general spending on school related expenses, we collect data on school supplies observable to the survey both in the classroom and follow-up survey. Panel B presents the results on school supplies that could be observed during classroom visits. The classroom visit school supplies index is normalized with respect to the control group and takes the average of four proportions: proportion of students in the classroom possessing uniforms, notebooks, math sets, and shoes.[30] In 2010, none of the treatment groups yields statistically significant increases relative to the control group, particularly after adjusting for multiple hypotheses.

For 2011, with an additional year of experience implementing the program and after the parent outreach had been fully launched, the Cash with Parent Outreach treatment arm performs considerably better than control, as well as the other three treatments (both when compared individually (0.34 standard deviation improvement), as well as when the other treatments are pooled with control, although after correcting for multiple hypotheses the p-values are 0.03 and 0.15, respectively). This result is then reinforced by the follow-up survey, reported in Panel C: The school supplies index from the self-reported survey also shows in Column 5 a 0.09 standard deviation improvement (se=0.05, p-value =0.09 unadjusted and 0.17 adjusted for multiple-hypotheses, with similar p-values of 0.01 and 0.15 for the tests comparing the Cash Parent arm to the other three arms).[31] We do not however observe any statistically significant shifts in school fees expenditures (albeit with

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[29] If control group households were buying school supplies earlier than treatment schools, because of the savings accounts and fairs, we would on average observe this because the classroom surveys were conducted during the term, not merely at the end of the term.

[30] Appendix Table 4a presents the results for each of the components of this index.

[31] Appendix Tables 4a, 4b and 4c provide the details for each component of the School Supplies Indices in Panels B and C. The differences seem to be driven primarily by exercise books, although the individual components analysis is less robust statistically.

large standard errors), self-reported absence because of failure to pay school fees, or amount paid for most recent tests.[32]

Panel C reports on data from the follow-up survey on parental involvement and school outcomes. Although the school supplies and test score impacts are strongest on the Cash with Parent Outreach treatment cell, we do not observe a direct impact on an index of three questions[33] regarding parental involvement in the child's education (or the individual components, as reported in Appendix Table 4b).

Next we turn to test score results in Table 5.[34] We put forward two basic mechanisms here: first, the savings account enables the purchasing of school supplies that are necessary for learning; second, the parental outreach leads the households and children to use the savings accounts to actually spend the saved money on school supplies. This is consistent with the results in Table 4 on the impact on school supplies. And likewise, this mechanism predicts that the Cash with Parent Outreach treatment group should generate the largest (or only) positive impacts. Column 5 indicates that Cash with Parent Outreach improves overall test scores by 0.10 standard deviations (se=0.04, p-value=0.02 and 0.10 when unadjusted and adjusted for multiple hypotheses, respectively). Looking at the components of the test, we find improvements in grammar (0.13 standard deviations with confidence interval = [0.01,2.25] at the 95% level after multiple hypothesis correction and reading (0.11 standard deviation, with confidence interval = [-0.2,0.24] at the 95% level)., but no effect on math. None of the other three treatment groups generates statistically significant improvements compared to the control group, either overall or for any subject. However, we do observe a 0.10 reduction in math test scores for the Voucher with Parent Outreach treatment group (p-value=0.04 and 0.11 when unadjusted and adjusted for multiple hypotheses, respectively). While the magnitude of this negative effect is concerning, the aggregate test score is not statistically significant (-0.02 standard deviations, se=0.04), the result is not

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[32] This pattern of results is consistent with students' reports on the follow-up survey regarding the disposition of the saved funds. We observe that students in the cash treatment with the parent sensitization report spending 3.6 percent more of the saved funds on school related expenses than students in the cash treatment without the sensitization. This is not a large enough difference to explain our results, but we are skeptical of the accuracy of these self-reported answers. We observe no differences in the amount of the savings used to purchase food or clothing or given to other family members. The increase in school related expenditures primarily comes from "other" expenses. This difference, however, is likely too small to explain all of the observed increase in school supplies, suggesting that the parent sensitization functioned both to divert students' savings and other unsaved household resources towards school supplies (but only in the weak-commitment arm, i.e., the strong commitment rules dissuaded the parents – even if aware of the opportunity – from engaging in such reallocations). Ultimately however we recognize that these are small amounts and self-reported data and thus it is difficult to draw too much inference regarding the source of funds and any such reallocations.

[33] The three questions in the Parental Involvement Index are (1) Student thinks parents are responsible for children's education (2) Has your parent come to your school in the past year? (3) Has your parent seen a report of yours from school in the past year? Appendix Table 4b presents the results for each of the components in this index.

[34] Appendix Table 7 presents the correlations between baseline and follow-up test scores. Overall, test scores strongly correlate with each other, both across topics and across time.

statistically significant after multiple hypothesis correction, the other two components are fairly precise null effects (0.02 and -0.00 standard deviations, se=0.04 and 0.05), and there is little reason to posit a differentially negative effect for math versus other subject areas.

Interestingly, the positive test score results from the Cash with Parent Outreach treatment arm are consistent with Das et al. (2013) which finds similar effects resulting from a $3 per student increase in student supplies. Both sets of results contrast with the traditional view that resources have limited effects on learning (Kremer and Holla 2009). Appendix Table 6 repeats Table 5 without the controls for baseline individual test scores, and while the coefficients are similar the standard errors (due to omitted control variables for baseline test scores) are higher, and only the grammar test result remains statistically significant.

We also examine whether the improved test scores arises through increased attendance or enrollment, but find no evidence for either. Table 6 Panel A reports results on observed attendance as well as an index of three self-reported questions on attendance, and Panel B reports results on enrollment. None of the treatments generates statistically significant improvements relative to the control group.[35]

Last we examine several attitudinal indices, and child labor, in Table 7. Starting with the five attitudinal indexes, we note caution in interpretation: in theory, these may be either intermediate outcomes influenced directly by the treatment(s), or consequences of the shift in resources and test scores. In practice, we have no statistically significant results after adjusting for multiple hypotheses..[36]

In terms of child labor, critics of financial education for youth posit that introducing children to savings and financial decision-making may have the unintended consequence of focusing their attention on income, and then discourage school attendance in order to work (Varcoe et al. 2005). Berry, Karlan and Pradhan (2018) tests this in Ghana with students of similar age as this study, and finds that a financial education curriculum along with a savings box (but no directive or facilitation of using the savings for education expenses) did lead to higher child labor, whereas if a social values component was added to the financial education curriculum, there was no impact on child labor. In our setting, we find no impact from the program on child labor, either hours worked or total wages. Overall, the estimates from Tables 6 and 7, combined with the other outcomes, indicate that the observed effects on learning occur through changes in available supplies rather than changes in attitude or participation.

Although we could examine whether individuals who saved more also experienced higher increases in test scores, we have no instrument for saving more beyond the experimental variation, and thus are unable to explore such a specification without ignoring endogeneity

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[35] Appendix Table 4d presents the results for the components of the index.
[36] Appendix Tables 4e – 4f present the results for the components of these indices.

issues (i.e., that individuals who save more are also investing more in other ways to their education). Thus we do not explore such heterogeneity as part of our robustness tests.

To explore econometric robustness and robustness to risks of baseline imbalance, Appendix Tables 5 and 6 present the core results (Tables 4 to 5), except without controls for baseline test scores. We find no changes in the core results.

V. Conclusion

Weaker rather than stronger commitments can yield stronger impacts on behavior change. Specifically, in the context of an educational savings program, we find that families and children save more under a weaker commitment than a stricter commitment. The key difference was whether the funds had to be spent on educational expenses (strict) or were merely intended for the same (weak).

The purpose of commitment savings devices is to intentionally limit the use of deposited funds. In some contexts, however, such services may need to strike a balance between providing sufficient limitations to make the savings mechanisms useful while being careful not to make the limitations so severe that they deter savings. The stricter limitations may work worse for behavioral reasons (e.g., wanting option value or judgment to change own's mind) or for institutional reasons (e.g., not trusting the institution that is offering the commitment device). In our setup, for example, the voucher (i.e., stricter) treatment may work worse because individuals do not trust that proper and fairly priced school supplies will be available. However, although this seems plausible in the first year, we believe by the second year, after seeing the program work for a year, households should have learned that the right school supplies would be available at a reasonable price. Understanding the nature of this trade-off between strict and loose commitment is an important direction for future research.

When combined with a parent sensitization program, we find that families and children in the cash arm spend their savings on educational expenses (school supplies).[37] This does not, however, alter school participation – we find no effects on enrollment or attendance – but does improve students' scores on grammar by 0.13 standard deviations and on reading by 0.11 standard deviations (and on aggregate test scores, include math, by 0.10 standard deviations). This suggests that financial constraints may play an important role in students' academic performance and that understanding the role of families' financial decision

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[37] Although we find that the voucher treatment led to about half the deposits as that of the cash arm, we do not find that school supplies increased by half. We posit two possible explanations. First, although the point estimate is close to zero, we cannot reject, statistically, a point estimate of half of that of the cash treatment effect. Second, the voucher treatment arm may have led to a reduction in school supplies through an anchoring effect (if the amount saved in vouchers was smaller for some than they would have spent otherwise).

process may be an important element in understanding the overall production process of education.

On a practical level, we consider several implementation issues important to explore. As a program designed to improve student learning, treatment effects of this magnitude are large compared to other evaluations of interventions designed to provide resources to schools or directly to children (Jameel Poverty Action Lab 2014), but they are small relative to many other types of programs (most notably, for example, programs that provide additional resources while also changing pedagogical strategies). Taking the programs relatively low cost (2.24 USD per student per year) into account using the methodology proposed by Dhaliwal et. al. (2014), however, the program delivers learning gains at a cost of 1.49 USD per tenth of a standard deviation or 6.71 standard deviations per 100 USD[38] (note our estimates ignore the opportunity cost to the family of the alternative use of the funds saved). This is very competitive relative to other programs. Relative to the 27 studies compared by J-PAL (2014), only four produce improvements in test scores more cost-effectively.

In terms of encouraging family savings, the program costs were high relative to the savings generated. However, if the program generated long term savings behavior change, then between the continued savings and the improvement in educational outcomes, it would surpass typical cost benefit calculations. Because we do not observe changes in attitudes, however, we cannot confidently predict that the long-term impacts will sustain themselves (although lack of attitude changes does not mean the results will not sustain themselves: attitudes are difficult to measure and may merely reflect noise, and furthermore the habit and pattern of saving could change and sustain without changing attitudes (e.g., see Horn et al. 2023)). On the cost side, it may be possible to reduce costs, particularly with implementation via mobile banking. This would obviate the need for physical transfer of cash to a bank and lower the risk of theft from keeping cash in a (albeit locked) box at the school. However, if the group nature of the intervention (i.e., the public and communal training) was an important element for take-up (through mimicking of or learning from peers) and adherence (through monitoring and potential for social recognition), then a mobile banking implementation may lose that visual classroom element. Although these peer mechanisms were not emphasized in the training and implementation of the program, the fact that the savings were done publicly may have had such an effect.

On a more theoretical level, these results open up many related questions. How does the optimality of looser versus stricter commitments depend on whether savings is long term or short-term? If one is saving for potentially short-run needs, such as a buffer stock, looser knots may be optimal; whereas long-term savings, such as for retirement, may require tighter commitments as the benefits from savings are too remote. Also with respect to

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[38] Estimates are provided in 2011 USD.

timing, are external interventions of this sort effective in changing long term behavior, i.e., does the psychic cost of deviation persist, even without an outsider-led intervention?

Questions also persist regarding how such interventions influence intra-household dynamics. Did the intervention shift the preferences of the child, or the parents, or both, and what does this imply for intra-household cross-generational bargaining issues?

Lastly, design issues may be critical for such a program to work. For example, how critical was the timing element of the "soft" commitment device, i.e., the fact that the school supplies were immediately available for purchase at the time of withdrawal? If that was critical, it is a ringing endorsement for the "make it easy" mantra, and also implies that the soft commitment device may have worked for reasons elaborated on in Mullainathan and Shafir (2013), because it increased the attention of individuals to educational expenses at exactly the right moment, when they had cash in their hands.

Figure 1: Research Timeline
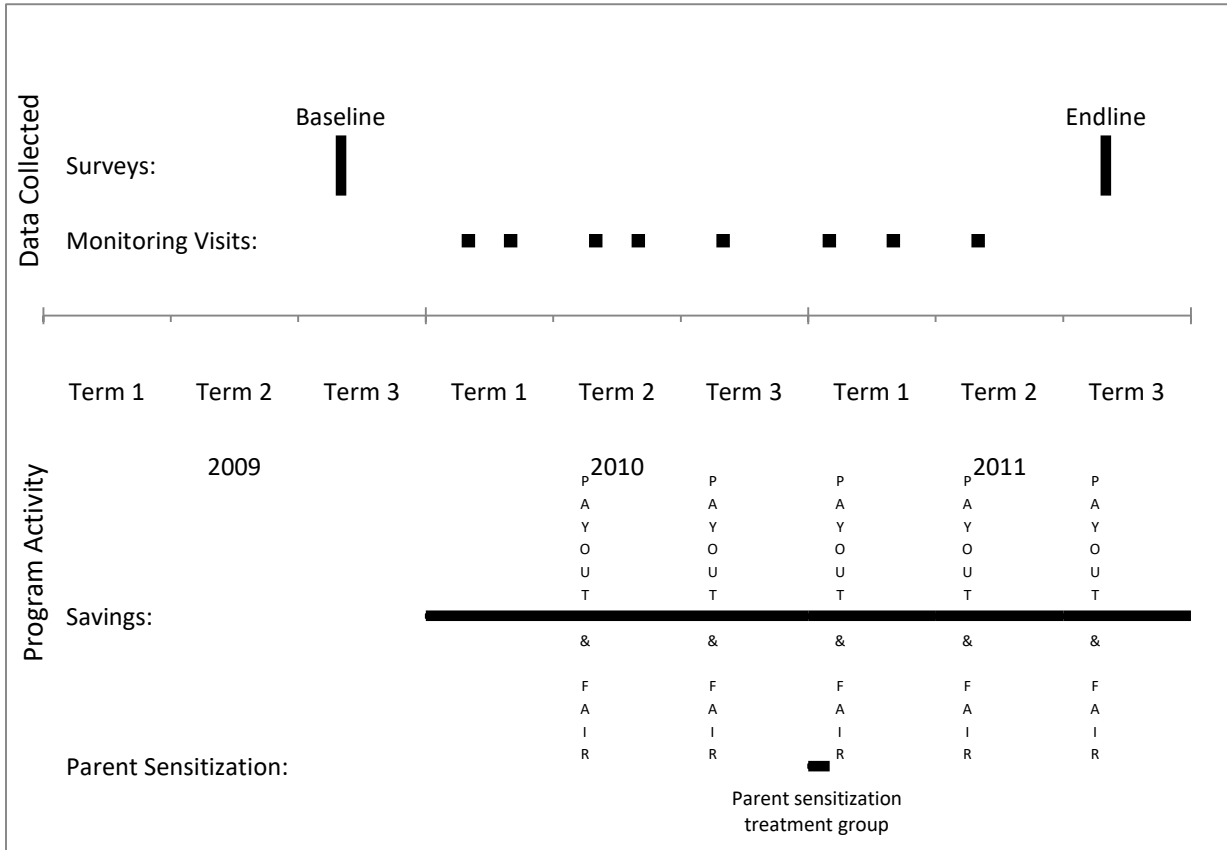
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Table 1: Summary Statistics and Orthogonality Verification of Random Assignment, Full Sample Frame from Baseline

Mean (standard deviation) and OLS

Dependent Variables	Number of Obs.	Mean (std dev)		OLS (one specification per cell)	OLS (one specification per row)				P-value for test of Cash Parent = Other Treatments
		Any Treatment	Control	Any Treatment	Cash with Parent Outreach	Voucher with Parent Outreach	Cash w/o Parent Outreach	Voucher w/o Parent Outreach	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Classroom Survey: % of students in attendance	811	0.09	0.10	-0.01	-0.02	-0.01	-0.01	-0.01	0.55
		(0.16)	(0.18)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	[1.00]
				[0.79]	[1.00]	[1.00]	[1.00]	[1.00]	
Classroom Survey: Supplies Index	813	0.03	0.01	0.02	0.22*	0.04	-0.12	-0.05	0.02
		(1.06)	(1.01)	(0.10)	(0.11)	(0.15)	(0.19)	(0.14)	[0.32]
				[1.00]	[0.77]	[1.00]	[1.00]	[1.00]	
Normalized Test Score: Grammar	4710	0.08	-0.00	0.11	0.12	-0.02	0.18*	0.14	0.87
		(0.99)	(1.00)	(0.07)	(0.11)	(0.09)	(0.10)	(0.09)	[1.00]
				[0.79]	[1.00]	[1.00]	[0.77]	[1.00]	
Normalized Test Score: Reading	4713	-0.00	-0.00	0.01	-0.02	-0.00	0.02	0.05	0.59
		(1.02)	(1.00)	(0.07)	(0.10)	(0.09)	(0.09)	(0.11)	[1.00]
				[1.00]	[1.00]	[1.00]	[1.00]	[1.00]	
Normalized Test Score: Math	4715	0.00	-0.00	0.02	-0.01	-0.07	0.07	0.08	0.72
		(0.98)	(1.00)	(0.06)	(0.09)	(0.08)	(0.10)	(0.10)	[1.00]
				[1.00]	[1.00]	[1.00]	[1.00]	[1.00]	
Normalized Test Score: Total	4716	0.03	-0.00	0.06	0.04	-0.03	0.11	0.11	0.77
		(1.00)	(1.00)	(0.07)	(0.11)	(0.09)	(0.10)	(0.11)	[1.00]
				[1.00]	[1.00]	[1.00]	[1.00]	[1.00]	
Student Survey: Attendance Code (lower = more attendance	4716	1.43	1.42	0.00	-0.07	0.10	-0.01	0.00	0.33
		(0.96)	(0.90)	(0.07)	(0.12)	(0.12)	(0.11)	(0.10)	[1.00]
				[1.00]	[1.00]	[1.00]	[1.00]	[1.00]	
Student Survey: Days missed per school term	3886	1.63	1.64	-0.02	-0.04	-0.06	-0.07	0.10*	0.57
		(0.91)	(0.95)	(0.04)	(0.07)	(0.07)	(0.07)	(0.06)	[1.00]
				[1.00]	[1.00]	[1.00]	[1.00]	[1.00]	
Student Survey: Prefer 500 Shillings today to 800 Shillings t	4702	0.65	0.64	0.01	0.02	-0.00	-0.04	0.07**	0.83
		(0.48)	(0.48)	(0.02)	(0.04)	(0.03)	(0.03)	(0.03)	[1.00]
				[1.00]	[1.00]	[1.00]	[1.00]	[0.77]	
Student Survey: Prefer 500 Shillings today to 800 Shillings i	4699	0.29	0.24	0.04**	0.06	0.07**	-0.02	0.07**	0.68
		(0.45)	(0.43)	(0.02)	(0.04)	(0.03)	(0.03)	(0.03)	[1.00]
				[0.79]	[1.00]	[0.77]	[1.00]	[0.77]	
Student Survey: Child receives pocket money from family	4678	0.75	0.74	0.01	-0.02	0.03	0.07***	-0.02	0.04
		(0.43)	(0.44)	(0.02)	(0.02)	(0.03)	(0.02)	(0.03)	[0.33]
				[1.00]	[1.00]	[1.00]	[0.15]	[1.00]	
Student Survey: Amount received in pocket money (shilling	4698	204.20	214.45	-7.92	-17.84	-1.30	9.69	-21.83	0.30
		(266.36)	(297.52)	(13.91)	(16.31)	(19.61)	(18.07)	(19.39)	[1.00]
				[1.00]	[1.00]	[1.00]	[1.00]	[1.00]	
Student Survey: Primary use of money earned is school supp	1983	0.23	0.27	-0.04	-0.03	-0.02	-0.07**	-0.03	0.89
		(0.42)	(0.44)	(0.02)	(0.03)	(0.04)	(0.03)	(0.04)	[1.00]
				[0.79]	[1.00]	[1.00]	[0.77]	[1.00]	
Joint Significance Test f-stat: one regression per column wit column header as dependent variable (p-value)				1.35	1.16	1.08	1.25	1.10	
				(0.21)	(0.32)	(0.38)	(0.27)	(0.37)	

Standard errors are in "()" brackets. Westfall-Young-adjusted p-values are in "[]" brackets. % of students in attendance: The enumerators count of the number of students present during a classroom visit, divided by the enrollment in the class as provided by the teacher. Supplies Index: the normalized mean of 4 binary measures: whether a student has a uniform, notebook, mathset, and shoes. The coefficient is expressed as standard deviations from the control mean. Attendance Code: A subjectively recorded code given with the enrollment data that indicates how frequently a student attends, from 1 (always attends) to 6 (never attends). OLS specifications: Columns 4 and Colums 5-8 include robust standard errors, clustered by school (the unit of randomization), and subcounty fixed effects (the stratification variable). Column 9 is the p-value of an F-test of sigificance on a regression of the cash parent treatment against all other treatments and the same specifications as in Columns 5-8. UGX = Ugandan Shillings, 1 USD = 2815 UGX. * p<0.10 ** p<0.05 *** p<0.01

Table 2: Summary Statistics and Orthogonality Verification of Random Assignment, Post-Attrition Sample Frame
Mean (standard deviation) and OLS

Dependent Variables	Number of Obs.	Mean (std dev)		OLS (one specification per cell)	OLS (one specification per row)				P-value for test of Cash Parent = Other Treatments
		Any Treatment	Control	Any Treatment	Cash with Parent Outreach	Voucher with Parent Outreach	Cash w/o Parent Outreach	Voucher w/o Parent Outreach	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Follow-up Survey Completed (of Baseline Students)	4716	0.82	0.81	0.00	0.01	0.00	-0.01	0.02	0.74
		(0.39)	(0.39)	(0.01)	(0.02)	(0.02)	(0.02)	(0.02)	[1.00]
				[1.00]	[1.00]	[1.00]	[1.00]	[1.00]	
Normalized Test Score: Grammar	3832	0.09	0.01	0.11	0.13	-0.02	0.19**	0.14	0.81
		(0.99)	(1.00)	(0.07)	(0.11)	(0.09)	(0.09)	(0.10)	[1.00]
				[1.00]	[1.00]	[1.00]	[1.00]	[1.00]	
Normalized Test Score: Reading	3835	0.01	0.01	0.02	-0.00	0.01	0.02	0.06	0.66
		(1.02)	(1.00)	(0.07)	(0.11)	(0.09)	(0.09)	(0.12)	[1.00]
				[1.00]	[1.00]	[1.00]	[1.00]	[1.00]	
Normalized Test Score: Math	3837	-0.00	0.01	0.02	0.01	-0.07	0.05	0.07	0.85
		(0.98)	(0.98)	(0.06)	(0.09)	(0.09)	(0.10)	(0.10)	[1.00]
				[1.00]	[1.00]	[1.00]	[1.00]	[1.00]	
Normalized Test Score: Total	3837	0.04	0.01	0.06	0.06	-0.02	0.10	0.10	0.87
		(0.99)	(0.99)	(0.07)	(0.11)	(0.09)	(0.09)	(0.11)	[1.00]
				[1.00]	[1.00]	[1.00]	[1.00]	[1.00]	
Student Survey: Attendance Code (lower = more attendance)	3837	1.42	1.42	-0.02	-0.08	0.07	-0.04	-0.02	0.39
		(0.94)	(0.90)	(0.07)	(0.12)	(0.12)	(0.10)	(0.10)	[1.00]
				[1.00]	[1.00]	[1.00]	[1.00]	[1.00]	
Student Survey: Days missed per school term	3145	1.62	1.63	-0.01	-0.03	-0.04	-0.06	0.08	0.56
		(0.91)	(0.93)	(0.05)	(0.07)	(0.08)	(0.07)	(0.06)	[1.00]
				[1.00]	[1.00]	[1.00]	[1.00]	[1.00]	
Student Survey: Prefer 500 Shillings today to 800 Shillings tomorrow	3824	0.65	0.65	0.00	0.01	0.00	-0.06*	0.06	0.92
		(0.48)	(0.48)	(0.02)	(0.04)	(0.04)	(0.03)	(0.04)	[1.00]
				[1.00]	[1.00]	[1.00]	[1.00]	[1.00]	
Student Survey: Prefer 500 Shillings today to 800 Shillings next week	3821	0.29	0.25	0.04*	0.05	0.06*	-0.01	0.06*	0.67
		(0.45)	(0.43)	(0.02)	(0.04)	(0.03)	(0.03)	(0.03)	[1.00]
				[1.00]	[1.00]	[1.00]	[1.00]	[1.00]	
Student Survey: Child receives pocket money from family	3805	0.75	0.74	0.01	-0.01	0.02	0.06**	-0.02	0.19
		(0.43)	(0.44)	(0.02)	(0.02)	(0.03)	(0.02)	(0.03)	[1.00]
				[1.00]	[1.00]	[1.00]	[1.00]	[1.00]	
Student Survey: Amount received in pocket money (shillings)	3821	199.30	217.59	-15.15	-18.53	-12.75	5.05	-32.81*	0.66
		(248.80)	(303.02)	(15.12)	(18.68)	(21.49)	(18.94)	(17.66)	[1.00]
				[1.00]	[1.00]	[1.00]	[1.00]	[1.00]	
Student Survey: Primary use of money earned is school supplies	1647	0.22	0.26	-0.04	-0.03	-0.02	-0.08***	-0.02	0.77
		(0.41)	(0.44)	(0.02)	(0.03)	(0.04)	(0.03)	(0.04)	[1.00]
				[1.00]	[1.00]	[1.00]	[0.35]	[1.00]	

Standard errors are in "()" brackets. Westfall-Young-adjusted p-values are in "[]" brackets. % of students in attendance: The enumerators count of the number of students present during a classroom visit, divided by the enrollment in the class as provided by the teacher. Supplies Index: the normalized mean of 4 binary measures: whether a student has a uniform, notebook, mathset, and shoes. The coefficient is expressed as standard deviations from the control mean. Attendance Code: A subjectively recorded code given with the enrollment data that indicates how frequently a student attends, from 1 (always attends) to 6 (never attends). OLS specifications: Columns 4 and 5-8 include robust standard errors, clustered by school (the unit of randomization), and subcounty fixed effects (the stratification variable). Column 9 is the p-value of an F-test of sigificance on a regression of the cash parent treatment against all other treatments and the same specifications as in Columns 5-8. UGX = Ugandan Shillings, 1 USD = 2815 UGX. * p<0.10 ** p<0.05 *** p<0.01

Table 3: Super Savers Program Savings by Treatment Group in '000 UGX
Mean (standard deviation)

	Mean				P-value from t-test	
	Cash with Parent Outreach	Voucher with Parent Outreach	Cash w/o Parent Outreach	Voucher w/o Parent Outreach	Cash vs. Voucher	Outreach vs. No Outreach
	(1)	(3)	(2)	(4)	(5)	(6)
Panel A: 2010						
Average Cumulative Deposits Made per School (2010)	180.29	109.09	186.76	105.24	0.02	0.95
	(232.49)	(84.84)	(126.37)	(86.44)	[0.04]	[0.93]
Average Cumulative Deposits Made per Student in 2010 (any attendance)	0.95	0.58	0.99	0.48	0.00	0.96
	(0.84)	(0.52)	(0.73)	(0.39)	[0.01]	[0.93]
Average Cumulative Deposits Made per Student in 2010 (avg attendance)	1.28	0.78	1.43	0.69	0.00	0.83
	(1.08)	(0.67)	(1.11)	(0.60)	[0.01]	[0.90]
Average Cumulative Deposits Made per Student (baseline attendance)	1.37	0.90	1.99	0.73	0.00	0.49
	(1.20)	(0.78)	(2.06)	(0.64)	[0.01]	[0.65]
Panel B: 2011						
Average Cumulative Deposits Made per School (2011)	346.78	156.78	366.47	185.07	0.00	0.59
	(357.38)	(71.03)	(225.81)	(128.67)	[0.01]	[0.76]
Average Cumulative Deposits Made per Student in 2011 (any attendance)	3.60	1.26	2.91	1.51	0.03	0.73
	(5.47)	(0.61)	(2.22)	(1.34)	[0.04]	[0.81]
Average Cumulative Deposits Made per Student in 2011 (avg attendance)	4.41	1.60	3.67	1.77	0.03	0.71
	(6.98)	(0.68)	(2.90)	(1.55)	[0.04]	[0.81]
Average Cumulative Deposits Made per Student (baseline attendance)	2.79	1.33	3.47	1.41	0.00	0.48
	(2.39)	(0.84)	(2.22)	(1.48)	[0.01]	[0.65]
Number of Schools	19	19	20	20		

Standard errors are in "()" brackets. Westfall-Young-adjusted p-values are in "[]" brackets. Results from bank administrative school-level data. Note that these data are collected at the school level, i.e., the Average Deposits per Student is the average across schools of the average deposits per student at each school. Number of students per school is calculated using the attendance data from 5 visits in the first year and 3 visits in the second year. The "any attendance" specification counts any student who attended during any of the visits; the "avg attendance" uses the average number of students present over the visits. OLS specifications: Columns 5-6 include subcounty fixed effects (the stratification variable). UGX = Ugandan Shillings, 1 USD = 2815 UGX. * p<0.10 ** p<0.05 *** p<0.01.

Table 4-A: Process Outcomes, Self-Reported in Follow-up Survey, Intent to Treat Estimates
Mean (standard deviation) and OLS

Dependent Variables	Number of Obs.	Mean (std dev) Any Treatment	Control	OLS (one specification per cell) Any Treatment	Cash w/ Parent Outreach	Voucher w/ Parent Outreach	Cash w/o Parent Outreach	Voucher w/o Parent Outreach	P-value for test of Cash w/ Parent = Other Treatments	P-value for test of Cash w/ Parent = Voucher w/ Parent
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Panel A: Savings Process Outcomes (Self-reported in Student Follow-up Survey - 2011)										
Heard of Super Savers Program	3823	0.79	0.11	0.67***	0.69***	0.67***	0.68***	0.64***	0.24	0.77
		(0.41)	(0.32)	(0.02)	(0.02)	(0.03)	(0.02)	(0.03)	[1.00]	[1.00]
				[0.00]	[0.00]	[0.00]	[0.00]	[0.00]		
Ever Talked with Parents about Saving?	3821	0.51	0.36	0.15***	0.15***	0.13***	0.17***	0.16***	0.77	0.71
		(0.50)	(0.48)	(0.02)	(0.03)	(0.03)	(0.03)	(0.03)	[1.00]	[1.00]
				[0.00]	[0.00]	[0.00]	[0.00]	[0.00]		
Saved with Super Savers	3824	0.44	0.03	0.40***	0.42***	0.39***	0.44***	0.35***	0.41	0.49
		(0.50)	(0.18)	(0.02)	(0.02)	(0.04)	(0.03)	(0.04)	[1.00]	[1.00]
				[0.00]	[0.00]	[0.00]	[0.00]	[0.00]		
Ever Saves Money	3821	0.79	0.79	0.01	0.01	0.02	0.02	-0.02	0.87	0.38
		(0.40)	(0.41)	(0.02)	(0.02)	(0.03)	(0.03)	(0.02)	[1.00]	[1.00]
				[0.45]	[0.67]	[0.42]	[0.61]	[0.39]		
Primary Source of Savings was Work	3830	0.43	0.47	-0.03*	-0.06**	-0.04	0.01	-0.04**	0.23	0.59
		(0.50)	(0.50)	(0.02)	(0.03)	(0.03)	(0.03)	(0.02)	[1.00]	[1.00]
				[0.12]	[0.09]	[0.34]	[0.67]	[0.08]		
Any Funds Saved Came from Work	3822	0.49	0.53	-0.03*	-0.04	-0.04	0.00	-0.04**	0.71	0.97
		(0.50)	(0.50)	(0.02)	(0.03)	(0.03)	(0.03)	(0.02)	[1.00]	[1.00]
				[0.12]	[0.22]	[0.24]	[0.76]	[0.09]		
Any Funds Saved Came from Pocket Money from Parents Relative or Non-relative	3830	0.39	0.37	0.01	0.02	0.01	0.01	-0.00	0.50	0.88
		(0.49)	(0.48)	(0.02)	(0.03)	(0.02)	(0.03)	(0.03)	[1.00]	[1.00]
				[0.45]	[0.49]	[0.62]	[0.70]	[0.75]		
Any Funds Saved Came from Parents for the Purpose of Saving	3822	0.05	0.02	0.03***	0.03***	0.05***	0.03**	0.03**	0.88	0.42
		(0.22)	(0.13)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	[1.00]	[1.00]
				[0.00]	[0.01]	[0.00]	[0.07]	[0.09]		
Number of Locations Actively Used for Savings	3830	0.86	0.79	0.08***	0.09***	0.10***	0.07*	0.07**	0.71	0.48
		(0.61)	(0.52)	(0.02)	(0.03)	(0.04)	(0.04)	(0.03)	[1.00]	[1.00]
				[0.00]	[0.01]	[0.04]	[0.12]	[0.03]		
Savings Attitude Index	3830	0.05	-0.00	0.06	0.04	0.11	0.06	0.02	0.77	0.21
		(1.00)	(1.00)	(0.04)	(0.08)	(0.07)	(0.07)	(0.06)	[1.00]	[1.00]
				[0.21]	[0.62]	[0.20]	[0.41]	[0.67]		
Student Spent Savings on School Fees or Supplies or Lunch	3816	0.47	0.40	0.07***	0.09***	0.11***	0.05*	0.04	0.43	0.18
		(0.50)	(0.49)	(0.02)	(0.03)	(0.03)	(0.03)	(0.03)	[1.00]	[1.00]
				[0.00]	[0.00]	[0.00]	[0.10]	[0.27]		
Total Self-Reported Savings Last Term	3830	7029.00	7878.30	-634.65	127.79	-1493.61**	8.60	-1129.61*	0.22	0.20
		(13994.37)	(15095.04)	(490.68)	(826.65)	(733.24)	(714.66)	(616.46)	[1.00]	[1.00]
				[0.21]	[0.72]	[0.09]	[0.76]	[0.12]		
Total Self-Reported Savings Last Term (wins. 95%)	3830	5808.42	6606.29	-676.49**	-459.51	-1263.00***	-7.38	-941.18**	0.49	0.56
		(8040.78)	(8338.76)	(277.72)	(448.15)	(427.14)	(453.77)	(367.13)	[1.00]	[1.00]
				[0.03]	[0.38]	[0.01]	[0.76]	[0.03]		
In-school Self-Reported Savings Last Term (wins. 95%)	3830	560.77	62.52	492.58***	525.57***	415.89***	632.91***	405.29***	0.51	0.19
				[0.00]	[0.00]	[0.00]	[0.00]	[0.00]		
Out-of-school Self-Reported Savings Last Term (wins. 95%)	3830	4932.84	6465.81	-1391.98***	-1245.07***	-1727.81***	-1027.29**	-1547.86***	0.66	0.57
		(7955.66)	(8289.77)	(283.64)	(471.75)	(440.35)	(445.95)	(380.41)	[1.00]	[1.00]
				[0.00]	[0.03]	[0.00]	[0.05]	[0.00]		

Standard errors are in "()" brackets. Westfall-Young-adjusted p-values are in "[]" brackets. **Savings Attitude Index** includes 7 statements each of which the student evaluated on a Likert scale, 1-5. All scales were converted after the fact so that higher on the scale meant more positive attitude toward saving. 1) Saving money is not necessary if you live at home with your family. 2) Saving is a good thing to do. 3) Saving is for adults only. 4) My parents or relatives would be proud of me for saving. 5) Managing to save makes me feel happy with myself. 6) It's better to spend money today than to save it for use in the future. 7) Every time I get money I put away some money for saving. **In School and Out of School Self Reported Savings (Follow-up Survey)**: sum of amount of money respondents reported saving during the last school term in each of a variety of locations (at home in local bank, hidden at home, give to a family member, savings program at school -- which likely includes the savings held as part of the treatment, in a bank account of a family member, other). Due to outliers in the treatment group, especially in the Cash- No Parent group, these two variables are winsorized at the 95% level. Number of locations actively used for saving: the number of locations students reported saving their money in during the last term. The variable is censored at three locations because the survey did not record more than three; but this is not a major concern since only 5 students (0.1% of sample) reported saving in three locations, the rest saved in two or fewer. OLS specifications: Columns 3 amd 4-8 include robust standard errors clustered by school (the unit of randomization); controls for students' baseline test scores in grammar, reading, and mat; if available, a control for the baseline value of the dependent variable; and subcounty fixed effects (the stratification variables). Column 9 (10) is the p-value of an F-test of sigificance on a regression of the cash w/ parent treatment against all other treatments (the voucher w/ parent treatment) and the same specifications as in Columns 5-8. UGX = Ugandan Shillings, 1 USD = 2815 UGX. *p<0.10 **p<0.05 ***p<0.01.

Table 4-BC: Process and Intermediate Outcomes, Intent to Treat Estimates
Mean (standard deviation) and OLS

| Dependent Variables | Number of Obs. | Mean (std dev) | | OLS (one specification per cell) | OLS (each row = one regression) | | | | P-value for test of Cash Parent = Other Treatments | P-value for test of Cash w/ Parent = Voucher w/ Parent |
| | | Any Treatment | Control | Any Treatment | Cash w/ Parent Outreach | Voucher w/ Parent Outreach | Cash w/o Parent Outreach | Voucher w/o Parent Outreach | | |
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Panel B: Intermediate Outcomes (Classroom Visits)										
School Supplies Index 2010	813	-0.16	-0.10	-0.08	0.11	-0.06	-0.15	-0.22	0.05	0.24
		(1.18)	(0.89)	(0.12)	(0.12)	(0.20)	(0.22)	(0.19)	[0.56]	[1.00]
				[0.40]	[0.40]	[0.67]	[0.57]	[0.30]		
School Supplies Index 2011	950	0.37	0.25	0.08	0.34**	0.04	-0.09	0.04	0.01	0.13
		(0.91)	(0.89)	(0.11)	(0.13)	(0.18)	(0.19)	(0.15)	[0.18]	[1.00]
				[0.40]	[0.03]	[0.70]	[0.63]	[0.67]		
Panel C: Other Process Outcomes (Self-reported in Student Follow-up Survey - 2011)										
School Supplies Index	3830	0.00	0.00	-0.01	0.09*	0.02	-0.10	-0.06	0.01	0.27
		(1.05)	(1.00)	(0.04)	(0.05)	(0.05)	(0.08)	(0.06)	[0.18]	[1.00]
				[0.45]	[0.14]	[0.67]	[0.27]	[0.37]		
School Fees	3525	28804.26	33580.77	-4816.38*	-4104.35	-6298.36	-3909.25	-4940.97	0.83	0.67
		(64594.63)	(76629.27)	(2892.69)	(3328.13)	(3831.05)	(3820.30)	(3832.89)	[1.00]	[1.00]
				[0.12]	[0.29]	[0.16]	[0.38]	[0.27]		
Cost of Most Recent Test	2343	1506.71	1589.22	-61.12	-69.64	76.03	-300.42	26.49	0.95	1.00
		(2658.92)	(2843.68)	(188.32)	(273.16)	(256.64)	(242.67)	(298.73)	[1.00]	[1.00]
				[0.45]	[0.68]	[0.67]	[0.29]	[0.75]		
Parental Involvement Index	3830	0.01	0.00	0.00	0.03	-0.02	-0.00	-0.01	0.43	0.36
		(1.04)	(1.00)	(0.04)	(0.06)	(0.06)	(0.06)	(0.06)	[1.00]	[1.00]
				[0.51]	[0.62]	[0.68]	[0.76]	[0.75]		
Primarily Used Money Earned for School Fees or Supplies	3830	0.14	0.12	0.02*	0.02	0.02	0.02	0.02	0.97	0.87
		(0.35)	(0.32)	(0.01)	(0.02)	(0.02)	(0.02)	(0.02)	[1.00]	[1.00]
				[0.10]	[0.27]	[0.27]	[0.34]	[0.40]		
Missed School Because Sent to Look for Fees or Lack of Scholastic Materials	3575	0.18	0.18	0.00	-0.01	0.00	0.02	-0.01	0.67	0.97
		(0.38)	(0.39)	(0.01)	(0.02)	(0.02)	(0.02)	(0.02)	[1.00]	[1.00]
				[0.51]	[0.67]	[0.76]	[0.39]	[0.66]		

Standard errors are in "()" brackets. Westfall-Young-adjusted p-values are in "[]" brackets. **School Supplies Index (Classroom Visits)**: Enumerators at several classroom visits each term counted the number of students with school supplies, which was then divided by the number of students in attendance. Components detailed in Appendix Table 4a. **School Supplies Index (Follow-up Survey)**: a standardized index of the count of categories for which at least one item is owned of the following: uniforms, notebooks, mathsets, and shoes. Components detailed in Appendix Table 4b. **Parental Involvement Index** includes 3 questions: 1) Student thinks parents are responsible for children's education 2) Has your parent come to your school in the past year? 3) Has your parent seen a report of yours from school in the past year? Components detailed in Appendix Table 4b. Components detailed in Appendix Table 4b. OLS specifications: Columns 4 amd 5-8 include robust standard errors clustered by school (the unit of randomization); controls for students' baseline test scores in grammar, reading, and math (not for Panel B since the dependent variable is school-level); if available, a control for the baseline value of the dependent variable; and subcounty fixed effects (the stratification variables). Baseline values are also included as controls for "School Supplies Index 2010", "School Supplies Index 2011", "School fees", and "Missed school because sent to look for fees or lack of scholastic materials" variables (others are not available at baseline). Column 9 (10) is the p-value of an F-test of sigificance on a regression of the cash w/ parent treatment against all other treatments (the voucher w/ parent treatment) and the same specifications as in Columns 5-8. UGX = Ugandan Shillings, 1 USD = 2815 UGX. *p<0.10 **p<0.05 ***p<0.01.

Table 5: Effect of Super Savers on Normalized Test Scores, Follow-up 2011
Mean (standard deviation) and OLS

	Number of Obs.	Mean (std dev)		OLS (one specification per cell)	OLS (each row = one regression)				P-value for test of Cash Parent = Other Treatments	P-value for test of Cash w/ Parent = Voucher w/ Parent
		Any Treatment	Control	Any Treatment	Cash w/ Parent Outreach	Voucher w/ Parent Outreach	Cash w/o Parent Outreach	Voucher w/o Parent Outreach		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Grammar	3761	0.05	0.00	0.03	0.13***	0.02	0.04	-0.06	0.00	0.06
		(1.05)	(1.00)	(0.03)	(0.04)	(0.04)	(0.05)	(0.06)	[0.01]	[0.05]
				[1.00]	[0.04]	[1.00]	[1.00]	[1.00]		
Reading	3758	0.02	0.00	0.01	0.11**	-0.00	-0.04	-0.04	0.00	0.03
		(1.01)	(1.00)	(0.04)	(0.05)	(0.05)	(0.05)	(0.07)	[0.01]	[0.05]
				[1.00]	[0.10]	[1.00]	[1.00]	[1.00]		
Math	3761	-0.04	0.00	-0.05	0.01	-0.10**	-0.01	-0.08	0.11	0.04
		(1.00)	(1.00)	(0.04)	(0.05)	(0.04)	(0.05)	(0.07)	[0.03]	[0.05]
				[1.00]	[1.00]	[0.11]	[1.00]	[1.00]		
Total	3758	0.01	-0.00	0.00	0.10**	-0.02	-0.00	-0.06	0.00	0.02
		(1.02)	(1.00)	(0.03)	(0.04)	(0.04)	(0.04)	(0.07)	[0.01]	[0.05]
				[1.00]	[0.10]	[1.00]	[1.00]	[1.00]		

Standard errors are in "()" brackets. Westfall-Young-adjusted p-values are in "[]" brackets. OLS specifications: Columns 4 and 5-8 include robust standard errors clustered by school (the unit of randomization); controls for students' baseline test scores in grammar, reading, and math; and subcounty fixed effects (the stratification variables). Column 9 (10) is the p-value of an F-test of sigificance on a regression of the cash parent treatment against all other treatments (the voucher w/parent treatment) and the same specifications as in Columns 5-8. *p<0.10 **p<0.05 ***p<0.01.

Table 6: Effect of Super Savers on School Participation
Mean (standard deviation) and OLS

| | Number of Obs. | Mean (std dev) | | OLS (one specification per cell) | OLS (each row = one regression) | | | | P-value for test of Cash Parent = Other Treatments |
| | | Any Treatment | Control | Any Treatment | Cash w/ Parent Outreach | Voucher w/ Parent Outreach | Cash w/o Parent Outreach | Voucher w/o Parent Outreach | |
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Panel A: Attendance Rate									
2010	4707	0.34	0.35	-0.02	-0.06	-0.02	-0.03	0.02	0.22
		(0.42)	(0.42)	(0.03)	(0.04)	(0.04)	(0.04)	(0.04)	[0.83]
				[1.00]	[1.00]	[1.00]	[1.00]	[1.00]	
2011	4707	0.18	0.17	0.00	-0.02	0.00	0.02	0.01	0.38
		(0.36)	(0.35)	(0.02)	(0.03)	(0.03)	(0.03)	(0.02)	[0.83]
				[1.00]	[1.00]	[1.00]	[1.00]	[1.00]	
Overall (2010 & 2011 conbined)	4707	0.28	0.28	-0.01	-0.04	-0.01	-0.01	0.01	0.24
		(0.36)	(0.36)	(0.02)	(0.03)	(0.03)	(0.03)	(0.03)	[0.83]
				[1.00]	[1.00]	[1.00]	[1.00]	[1.00]	
Attendance Index	2926	-0.02	-0.00	-0.01	0.00	0.02	-0.05	-0.04	0.51
		(0.98)	(1.00)	(0.05)	(0.07)	(0.07)	(0.07)	(0.06)	
				[1.00]	[1.00]	[1.00]	[1.00]	[1.00]	[0.83]
Panel B: Enrollment Rate									
2010	4707	0.43	0.45	-0.03	-0.08	-0.03	-0.02	0.03	0.14
		(0.50)	(0.50)	(0.03)	(0.05)	(0.05)	(0.05)	(0.05)	
				[1.00]	[1.00]	[1.00]	[1.00]	[1.00]	[0.83]
2011	4707	0.22	0.22	-0.00	-0.03	-0.00	0.02	-0.01	0.34
		(0.41)	(0.41)	(0.02)	(0.04)	(0.03)	(0.04)	(0.03)	
				[1.00]	[1.00]	[1.00]	[1.00]	[1.00]	[0.83]

Standard errors are in "()" brackets. Westfall-Young-adjusted p-values are in "[]" brackets. **Attendance Rate:** Based on a roll call of students on the official school enrollment list, counting only those students present in the class when roll call was done. **Attendance Index:** includes 3 self-reported questions on student attendance: 1) Of the five school days of last week, how many were you absent? 2) Think of a normal week from last term, of the five school days how many were you usually absent from school? 3) Think of a normal month from last term, how many days were you usually absent? Components detailed in Appendix Table 4d. **Enrollment Rate:** Based on teacher responses as to whether a student on the official school enrollment list, was still enrolled at that school. OLS specifications: Columns 4 and 5-8 include robust standard errors clustered by school (the unit of randomization); controls for students' baseline test scores in grammar, reading, and math; if available, a control for the baseline value of the dependent variable; and subcounty fixed effects (the stratification variables). Here, baseline values are available only for "Attendance Index" variable. Column 9 is the p-value of an F-test of sigificance on a regression of the cash parent treatment against all other treatments and the same specifications as in Columns 5-8 *p<0.10 **p<0.05 ***p<0.01.

Table 7: Effect of Super Savers on Student Attitudes, Follow-up 2011
Mean (standard deviation) and OLS

| | Number of Obs. | Mean (std dev) | | OLS (one specification per cell) | OLS (each row = one regression) | | | | P-value for test of Cash Parent = Other Treatments |
| | | Any Treatment | Control | Any Treatment | Cash w/ Parent Outreach | Voucher w/ Parent Outreach | Cash w/o Parent Outreach | Voucher w/o Parent Outreach | |
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Self Esteem Index	3830	-0.02	-0.00	-0.03	-0.05**	-0.03	-0.03	-0.01	0.25
		(0.44)	(0.44)	(0.02)	(0.02)	(0.02)	(0.03)	(0.03)	[1.00]
				[1.00]	[1.00]	[1.00]	[1.00]	[1.00]	
Time Preference Index	3820	2.05	2.07	-0.02	-0.02	-0.02	-0.00	-0.03	0.99
		(0.83)	(0.82)	(-0.02)	(0.04)	(0.04)	(0.04)	(0.04)	[1.00]
				[1.00]	[1.00]	[1.00]	[1.00]	[1.00]	
Locus of Control (binary)	3818	0.58	0.60	-0.02	-0.01	-0.02	-0.01	-0.03	0.74
		(0.49)	(0.49)	(-0.02)	(0.02)	(0.02)	(0.02)	(0.02)	[1.00]
				[1.00]	[1.00]	[1.00]	[1.00]	[1.00]	
Financial Independence Index	3830	-0.04	0.00	-0.03	-0.05	-0.13**	0.06	-0.00	0.65
		(0.97)	(1.00)	(-0.03)	(0.06)	(0.06)	(0.06)	(0.05)	[1.00]
				[1.00]	[1.00]	[1.00]	[1.00]	[1.00]	
Aspiration Index	3830	-0.01	0.00	-0.03	-0.05	-0.03	0.02	-0.04	0.54
		(1.04)	(1.00)	(-0.03)	(0.06)	(0.06)	(0.04)	(0.06)	[1.00]
				[1.00]	[1.00]	[1.00]	[1.00]	[1.00]	
Total Annual Hours Worked (wins. 99%)	3830	295.33	294.96	6.88	1.01	-31.78	36.02	21.96	0.75
		(461.85)	(447.26)	(6.88)	(23.20)	(27.91)	(29.26)	(26.04)	[1.00]
				[1.00]	[1.00]	[1.00]	[1.00]	[1.00]	
Total Annual Income from Work (10k UGX) (wins. 99%)	3830	17.55	17.82	0.20	-1.50	-2.88	4.03*	1.17	0.21
		(34.42)	(33.91)	(0.20)	(1.76)	(2.18)	(2.08)	(2.00)	[1.00]
				[1.00]	[1.00]	[1.00]	[1.00]	[1.00]	

Standard errors are in "()" brackets. Westfall-Young-adjusted p-values are in "[]" brackets. **Self Esteem Index:** includes 10 statements each of which the student evaluated on a Likert scale, 1-5. All scales were converted after the fact so that higher on the scale meant higher self esteem. 1) I am satisfied with myself. 2) Sometimes I think I am no good at all. 3) I believe I have a number of good qualities. 4) I am able to do things as well as most children. 5) I do not have much to be proud of. 6) Sometimes I feel useless. 7) I believe I am a valuable person, at least as much as my classmates. 8) I wish I could have more respect for myself 9) I sometimes think that I am a failure. 10) When I think of myself, I usually think good thoughts. In addition to those 10 statements, there is one question: 11) Are you confident that you will be successful in the future? Components detailed in Appendix Table 4e. **Time Preference Index:** includes 2 hypothetical time preference choices. 1) Would you rather receive 500 shillings today or 800 shillings next week? 2) Would you rather receive 500 shillings today or 1,000 shillings next week? From these, respondents were split into low, medium, and high future preference groups. Components detailed in Appendix Table 4f. **Locus of Control:** If a person is successful in life, is it because he or she was lucky or because he or she worked very hard? (1=worked hard, 0= lucky) **Financial Independence Index:** includes 3 questions: 1) How much money do you think you will get in the next 7 days? 2) How much money did you get in the past 7 days? 3) How much pocket money are you given to spend as you wish? Components detailed in Appendix Table 4f. **Aspirations Index:** includes 4 questions about academic and vocation aspirations: 1) If you graduate from primary school, will your life be better than if you hadn't graduated? 2) Do you think you will go to secondary school? 3) Do you think you will reach university? 4) What do you want to be when you grow up? (student responded with career that requires higher education) Components detailed in Appendix Table 4f. OLS specifications: Columns 4 amd 5-8 include robust standard errors clustered by school (the unit of randomization); controls for students' baseline test scores in grammar, reading, and math; if available, a control for the baseline value of the dependent variable; and subcounty fixed effects (the stratification variables). Here, Here, baseline values are available only for "Time Prefernce Index" variable. Column 9 is the p-value of an F-test of sigificance on a regression of the cash parent treatment against all other treatments and the same specifications as in Columns 5-8. UGX = Ugandan Shillings, 1 USD = 2815 UGX. *p<0.10 **p<0.05 ***p<0.01.

	Number of Obs.	Mean	Std Dev	Min	25th Percentile	Median	75th Percentile	Max.
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Panel A: Annual School Fees for Each Student (in USD), winsorized at 90%								
Total of All Fees	3585	13.0	13.4	0.0	2.7	6.8	20.6	40.5
General Fee	3583	7.0	11.1	0.0	0.0	0.0	11.7	29.8
Food Fees	3584	1.2	1.7	0.0	0.0	0.1	1.8	4.9
Lunch Fee	3584	0.9	1.5	0.0	0.0	0.0	1.2	4.3
Chef/Grinding Fee	3583	0.2	0.4	0.0	0.0	0.0	0.0	1.1
Testing Fees	3584	2.1	2.5	0.0	0.0	1.1	3.2	7.5
Standardized Test Fee	3583	1.0	1.7	0.0	0.0	0.0	1.3	5.0
Practice Test Fee	3584	0.5	0.7	0.0	0.0	0.0	1.1	1.6
Test Paper Fee	3583	0.0	0.0	0.0	0.0	0.0	0.0	0.0
School Infrastructure Fees	3584	0.2	0.4	0.0	0.0	0.0	0.0	1.1
Development Fee	3583	0.1	0.3	0.0	0.0	0.0	0.0	0.9
School Necessities Fee	3584	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Extra Lessons Fee	3583	0.4	1.0	0.0	0.0	0.0	0.0	3.2
Panel B: Average Annual School Fees per Student for Each School (in USD), winsorized at 90%								
Total of All Fees	136	16.2	10.2	2.9	8.5	13.4	20.7	38.3
General Fee	136	10.5	9.3	0.0	3.8	7.8	12.6	31.8
Food Fees	136	2.2	1.9	0.0	0.9	1.6	2.7	6.4
Lunch Fee	136	1.9	1.9	0.0	0.6	1.0	2.2	6.4
Chef/Grinding Fee	136	0.3	0.3	0.0	0.0	0.2	0.5	0.7
Testing Fees	136	2.4	1.1	0.0	1.5	2.2	3.3	4.2
Standardized Test Fee	136	1.3	0.8	0.0	0.6	1.2	1.9	2.7
Practice Test Fee	136	0.7	0.5	0.0	0.3	0.7	1.1	1.5
Test Paper Fee	136	0.3	0.5	0.0	0.0	0.0	0.6	1.4
School Infrastructure Fees	136	0.3	0.3	0.0	0.0	0.2	0.5	1.0
Development Fee	136	0.2	0.3	0.0	0.0	0.1	0.4	0.8
School Necessities Fee	136	0.1	0.1	0.0	0.0	0.0	0.1	0.2
Extra Lessons Fee	136	0.7	0.8	0.0	0.0	0.3	1.0	2.5

The data here incorporate student-reported fees across three terms. Numbers are in USD, converted from UGX in Sept 2011 (when follow-up survey was conducted) at 2815UGX = 1USD. General Fee: A fee required to attend school. Because the government discourages General Fees, most schools do not charge them, but some schools, especially in urban areas still do. Food Fees: Include lunch fees and chef/grinding fees. The chef/grinding fee can either be monetary or in-kind (e.g., maize). We imputed the value of maize at 450 UGX/kg. Testing Fees: Include standardized test fees, practice test fees, and test paper fees. Practice test fee is often optional. School Infrastructure Fees: Include Development Fee and School Necessities Fee. The Development Fee is generally for infrastructure projects such as latrines, building repair, etc. The School Necessities Fee includes recurring costs such as toilet paper (and other supplies) and utilities.

Appendix Table 2: Data Collection Summary

	2010	2011	2012
Student Survey			
Grades Covered	P5, P6	P6, P7	
Median age	12, 13	13, 14	
Sample Size (Students)	4716	3838	
Attendance Survey			
Grades Covered	P5, P6	P6, P7	
Median age	12, 13	13, 14	
Sample Size (Students)	37797	29038	
Classroom Survey			
Grades Covered	P5, P6, P7	P5, P6, P7	P5, P6, P7
Median age	12, 13, 14	12, 13, 14	12, 13, 14
Sample Size (Classes)	406	408	340

Appendix Table 3: Additional Attrition Analysis

OLS

Dependent variable:	Follow-up Survey Completed	Follow-up Survey Completed	Follow-up Survey Completed	Follow-up Test Completed	Follow-up Test Completed	Follow-up Test Completed
	(1)	(2)	(3)	(4)	(5)	(6)
Cash with Parent Outreach	0.01	0.00	-0.00	0.01	0.00	-0.02
	(0.02)	(0.02)	(0.07)	(0.02)	(0.02)	(0.08)
Cash w/o Parent Outreach	-0.01	-0.01	0.05	0.00	-0.00	0.02
	(0.02)	(0.02)	(0.08)	(0.02)	(0.02)	(0.08)
Voucher with Parent Outreach	0.00	0.01	0.06	0.01	0.01	0.03
	(0.02)	(0.02)	(0.07)	(0.02)	(0.02)	(0.08)
Voucher w/o Parent Outreach	0.02	0.01	0.06	0.02	0.01	0.02
	(0.02)	(0.02)	(0.07)	(0.02)	(0.02)	(0.06)
Constant	0.76***	0.71***	0.69***	0.75***	0.69***	0.69***
	(0.02)	(0.04)	(0.05)	(0.02)	(0.04)	(0.06)
Observations	4716	3832	3832	4716	3832	3832
Covariates	No	Yes	Yes	No	Yes	Yes
Interactions between each covariate and each treatment variable	No	No	Yes	No	No	Yes
Control mean	0.81	0.81	0.81	0.80	0.80	0.80
(Control sd)	(0.39)	(0.39)	(0.39)	(0.40)	(0.40)	(0.40)
F-test (p-value) of joint significance of the four treatment assignments	0.58	0.37		0.23	0.08	
	(0.68)	(0.83)		(0.92)	(0.99)	
F-test (p-value) of joint significance of interaction terms of each covariate with each treatment			1.35			1.47
			(0.10)			(0.05)

OLS specifications: Columns 1-6 include robust standard errors clustered by school (the unit of randomization) and subcounty fixed effects (the stratification variables). Additionally, regressions reported in columns 2 and 5 include the following covariates from the baseline: test scores in grammar, reading, and math, attendance code, how often student misses the school, questions on time preference, whether the student gets any pocket money, amount of pocket money if they get any (winsorized at 99th percentile), if the student earns any money, and the amount of money earned (winsorized at 99th percentile). Regressions in columns 3 and 6 include these covariates and their interactions with the four treatment arms. * p<0.10 ** p<0.05 *** p<0.01

Appendix Table 4a: Components of Table 4, Panel B, School Supplies Index

Mean (standard deviation) and OLS

	Number of Obs.	Mean (std dev)		OLS (one specification per cell)	OLS (each row = one regression)				P-value for test of Cash Parent = Other Treatments
		Any Treatment	Control	Any Treatment	Cash w/ Parent Outreach	Voucher w/ Parent Outreach	Cash w/o Parent Outreach	Voucher w/o Parent Outreach	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Panel A: School Supplies Index & Components (Classroom Surveys 2010 and 2011)									
School Supplies Index (2010)	813	-0.16 (1.18)	-0.10 (0.89)	-0.08 (0.12)	0.12 (0.13)	-0.05 (0.20)	-0.17 (0.24)	-0.21 (0.19)	0.06
Shoes	813	0.25 (0.26)	0.25 (0.26)	0.00 (0.02)	0.00 (0.03)	0.04* (0.03)	-0.04 (0.04)	0.00 (0.03)	0.99
Uniform	813	0.85 (0.11)	0.84 (0.12)	-0.01 (0.02)	-0.00 (0.02)	0.01 (0.02)	-0.03 (0.04)	-0.01 (0.03)	0.70
Math Set	813	0.38 (0.11)	0.36 (0.10)	0.01 (0.01)	0.03 (0.02)	0.00 (0.02)	-0.01 (0.03)	0.01 (0.02)	0.24
Pencils	813	0.99 (0.03)	0.99 (0.04)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	-0.00 (0.01)	0.35
Exercise Book	813	0.99 (0.04)	1.00 (0.02)	-0.00 (0.00)	0.00 (0.00)	-0.01 (0.01)	0.00 (0.00)	-0.01 (0.01)	0.10
School Supplies Index (2011)	950	0.37 (0.91)	0.25 (0.89)	0.07 (0.12)	0.32** (0.13)	0.04 (0.18)	-0.12 (0.20)	0.05 (0.16)	0.02
Shoes	950	0.35 (0.26)	0.32 (0.24)	0.03 (0.02)	0.04 (0.03)	0.05* (0.03)	0.00 (0.03)	0.03 (0.03)	0.61
Uniform	950	0.88 (0.11)	0.86 (0.11)	-0.00 (0.02)	0.03** (0.02)	-0.01 (0.03)	-0.03 (0.04)	0.00 (0.03)	0.02
Math Set	950	0.44 (0.13)	0.44 (0.12)	-0.00 (0.01)	0.01 (0.02)	-0.00 (0.02)	-0.00 (0.02)	-0.01 (0.02)	0.38
Exercise Book	950	0.90 (0.09)	0.90 (0.11)	0.02 (0.02)	0.06** (0.02)	0.00 (0.03)	-0.00 (0.03)	0.01 (0.02)	0.01

OLS specifications: Columns 4 amd 5-8 include robust standard errors clustered by school (the unit of randomization), control for baseline supplies index, and subcounty fixed effects (the stratification variables). Column 9 is the p-value of an F-test of sigificance on a regression of the cash parent treatment against all other treatments and the same specifications as in Columns 5-8. * p<0.10 ** p<0.05 *** p<0.01

	Number of Obs.	Mean (std dev) Any Treatment	Control	OLS (one specification per cell) Any Treatment	OLS (each row = one regression) Cash w/ Parent Outreach	Voucher w/ Parent Outreach	Cash w/o Parent Outreach	Voucher w/o Parent Outreach	P-value for test of Cash Parent = Other Treatments
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
School Supplies Index & Components (Follow-up Survey - 2011)									
School Supplies Index	3830	0.00	0.00	-0.01	0.09*	0.02	-0.10	-0.06	0.01
		(1.05)	(1.00)	(0.04)	(0.05)	(0.05)	(0.08)	(0.06)	
Shoes	3830	0.20	0.19	0.01	0.01	0.02	-0.00	0.00	0.72
		(0.40)	(0.39)	(0.01)	(0.02)	(0.02)	(0.03)	(0.02)	
Uniform	3830	0.70	0.70	-0.00	0.04	0.01	-0.04	-0.03	0.05
		(0.46)	(0.46)	(0.02)	(0.03)	(0.02)	(0.03)	(0.03)	
Math Set	3830	0.38	0.36	0.01	0.02	0.02	-0.01	0.01	0.55
		(0.49)	(0.48)	(0.02)	(0.02)	(0.04)	(0.03)	(0.03)	
Pencils	3830	0.93	0.94	-0.02*	-0.01	-0.01	-0.03	-0.01	0.56
		(0.25)	(0.23)	(0.01)	(0.01)	(0.01)	(0.02)	(0.01)	
Exercise Book	3830	0.44	0.44	-0.00	0.07**	-0.02	-0.03	-0.04	0.00
		(0.50)	(0.50)	(0.02)	(0.03)	(0.03)	(0.04)	(0.04)	
Parental Involvement Index & Components (Follow-up Survey - 2011)									
Parental Involvement Index	3830	0.01	0.00	0.00	0.03	-0.02	-0.00	-0.01	0.43
		(1.04)	(1.00)	(0.04)	(0.06)	(0.06)	(0.06)	(0.06)	
Has parent seen a report from school in the past year?	3830	0.90	0.90	-0.01	0.01	-0.00	-0.02	-0.02	0.20
		(0.30)	(0.29)	(0.01)	(0.02)	(0.02)	(0.02)	(0.02)	
Has your parent come to your school in the past year?	3830	0.71	0.71	-0.00	-0.00	-0.02	-0.00	0.01	0.72
		(0.46)	(0.45)	(0.02)	(0.03)	(0.02)	(0.03)	(0.03)	
Student thinks parents are responsible for education.	3830	0.72	0.70	0.02	0.02	0.01	0.04	0.02	1.00
		(0.45)	(0.46)	(0.02)	(0.03)	(0.03)	(0.03)	(0.03)	
Savings Attitude Index & Components (Follow-up Survey - 2011)									
Savings Attitude Index	3830	0.05	-0.00	0.06	0.04	0.11	0.06	0.02	0.77
		(1.00)	(1.00)	(0.04)	(0.08)	(0.07)	(0.07)	(0.06)	
Saving money is not necessary if you live at home with your family.	3811	3.07	2.96	0.11***	0.14**	0.12**	0.11*	0.07	0.51
		(0.81)	(0.85)	(0.04)	(0.06)	(0.05)	(0.06)	(0.05)	
Saving is a good thing to do.	3822	3.49	3.50	-0.01	-0.06	0.05	-0.04	-0.00	0.09
		(0.54)	(0.54)	(0.03)	(0.04)	(0.04)	(0.04)	(0.04)	
Saving is for adults only.	3810	3.36	3.33	0.03	0.03	0.08*	-0.00	0.01	0.95
		(0.64)	(0.65)	(0.03)	(0.05)	(0.04)	(0.04)	(0.04)	
	3761	3.21	3.20	0.01	0.01	0.01	0.02	-0.02	0.99
My parents or relatives would be proud of me for saving.		(0.58)	(0.61)	(0.02)	(0.04)	(0.03)	(0.04)	(0.03)	
	3811	3.38	3.35	0.03	0.04	0.05	0.01	0.03	0.81
Managing to save makes me feel happy with myself.		(0.58)	(0.61)	(0.03)	(0.04)	(0.04)	(0.04)	(0.04)	
It's better to spend money today than to save it for use in the future.	3805	3.16	3.13	0.04	0.00	0.06	0.08**	0.00	0.30
		(0.70)	(0.70)	(0.03)	(0.05)	(0.04)	(0.04)	(0.04)	
	3804	3.04	3.05	-0.01	0.01	-0.05	0.03	-0.03	0.61
Every time I get money I put away some money for saving.		(0.68)	(0.71)	(0.03)	(0.04)	(0.05)	(0.05)	(0.05)	

OLS specifications: Columns 4 amd 5-8 include robust standard errors clustered by school (the unit of randomization); controls for students' baseline test scores in grammar, reading, and math; and subcounty fixed effects (the stratification variables). Column 9 is the p-value of an F-test of sigificance on a regression of the cash parent treatment against all other treatments and the same specifications as in Columns 5-8. *p<0.10 **p<0.05 ***p<0.01.

Appendix Table 4c: Components of Table 4, Panel C, Individual School Supplies Items, Follow-up 2011
Mean (standard deviation) and OLS

	Number of Obs.	Mean (std dev)		specification per cell	OLS (each row = one regression)				P-value for test of Cash Parent = Other Treatments
		Any Treatment	Control	Any Treatment	Cash w/ Parent Outreach	Voucher w/ Parent Outreach	Cash w/o Parent Outreach	Voucher w/o Parent Outreach	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Reports owning at least 1 pair of shoes	3830	0.63	0.62	0.00	0.00	-0.02	0.00	0.02	0.91
		(0.48)	(0.49)	(0.02)	(0.02)	(0.03)	(0.03)	(0.03)	
Student wearing shoes during survey	3830	0.20	0.19	0.01	0.01	0.02	-0.00	0.00	0.72
		(0.40)	(0.39)	(0.01)	(0.02)	(0.02)	(0.03)	(0.02)	
Reports owning at least 1 uniform	3829	0.84	0.86	-0.02	0.01	0.00	-0.05**	-0.04*	0.09
		(0.36)	(0.35)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	
Child wearing uniform during interview	3830	0.70	0.70	-0.00	0.04	0.01	-0.04	-0.03	0.05
		(0.46)	(0.46)	(0.02)	(0.03)	(0.02)	(0.03)	(0.03)	
Reports owning a math set	3830	0.38	0.36	0.01	0.02	0.02	-0.01	0.01	0.55
		(0.49)	(0.48)	(0.02)	(0.02)	(0.04)	(0.03)	(0.03)	
Shows enumerator a math set	3830	0.24	0.21	0.02	0.05**	0.04	-0.01	0.02	0.18
		(0.42)	(0.41)	(0.02)	(0.02)	(0.03)	(0.03)	(0.03)	
Reports owning at least 1 pen or pencil	3830	0.93	0.94	-0.02*	-0.01	-0.01	-0.03	-0.01	0.56
		(0.25)	(0.23)	(0.01)	(0.01)	(0.01)	(0.02)	(0.01)	
Shows enumerator at least 1 pen or pencil	3830	0.82	0.82	-0.01	-0.00	0.00	-0.03	0.00	0.80
		(0.38)	(0.38)	(0.01)	(0.02)	(0.02)	(0.03)	(0.02)	
Reports owning >6 exercise books	3830	0.44	0.44	-0.00	0.07**	-0.02	-0.03	-0.04	0.00
		(0.50)	(0.50)	(0.02)	(0.03)	(0.03)	(0.04)	(0.04)	
Shows enumerator >6 exercise books	3830	0.31	0.32	-0.01	0.04	-0.01	-0.04	-0.02	0.00
		(0.46)	(0.47)	(0.02)	(0.03)	(0.03)	(0.03)	(0.03)	

OLS specifications: Columns 4 amd 5-8 include robust standard errors clustered by school (the unit of randomization); controls for students' baseline test scores in grammar, reading, and math; and subcounty fixed effects (the stratification variables). Column 9 is the p-value of an F-test of sigificance on a regression of the cash parent treatment against all other treatments and the same specifications as in Columns 5-8. *p<0.10 **p<0.05 ***p<0.01.

Appendix Table 4d: Components of Table 6, Attendence Index, Follow-up 2011
Mean (standard deviation) and OLS

	Number of Obs.	Mean (std dev)		OLS (one specification per cell)	OLS (each row = one regression)				P-value for test of Cash Parent = Other Treatments
		Any Treatment	Control	Any Treatment	Cash w/ Parent Outreach	Voucher w/ Parent Outreach	Cash w/o Parent Outreach	Voucher w/o Parent Outreach	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Attendance Index & Components (Follow-up Survey - 2011)									
Attendance Index	3578	-0.02	-0.00	-0.02	0.02	0.00	-0.05	-0.03	0.24
		(0.98)	(1.00)	(0.04)	(0.06)	(0.06)	(0.06)	(0.06)	
Of five school days of last week, was absent for	3577	0.75	0.70	0.05	0.13	0.07	0.03	-0.03	0.35
		(1.33)	(1.27)	(0.06)	(0.11)	(0.08)	(0.09)	(0.08)	
In normal week from last term, how many days were you usually absent from school?	3578	1.27	1.31	-0.02	-0.00	-0.01	-0.04	-0.03	0.45
		(1.48)	(1.54)	(0.07)	(0.08)	(0.08)	(0.10)	(0.10)	
Think of a normal month from last term, how many days were you usually absent?	3455	3.34	3.59	-0.24*	-0.27	-0.17	-0.38**	-0.17	0.80
		(3.13)	(3.55)	(0.13)	(0.17)	(0.21)	(0.17)	(0.19)	

OLS specifications: Columns 4 amd 5-8 include robust standard errors clustered by school (the unit of randomization); controls for students' baseline test scores in grammar, reading, and math; and subcounty fixed effects (the stratification variables). Column 9 is the p-value of an F-test of sigificance on a regression of the cash parent treatment against all other treatments and the same specifications as in Columns 5-8. *p<0.10 **p<0.05 ***p<0.01.

Appendix Table 4e: Components of Table 7, Self Esteem Index, Follow-up 2011
Mean (standard deviation) and OLS

	Number of Obs.	Mean (std dev)		OLS (one specification per cell)	OLS (each row = one regression)				P-value for test of Cash Parent = Other Treatments
		Any Treatment	Control	Any Treatment	Cash w/ Parent Outreach	Voucher w/ Parent Outreach	Cash w/o Parent Outreach	Voucher w/o Parent Outreach	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Self Esteem Index & Components (Follow-up Survey - 2011)									
Self Esteem Index	3830	-0.02 (0.44)	-0.00 (0.44)	-0.03 (0.02)	-0.05** (0.02)	-0.03 (0.02)	-0.03 (0.03)	-0.01 (0.03)	0.25
I am satisfied with myself.	3804	3.20 (0.67)	3.21 (0.64)	-0.01 (0.03)	-0.01 (0.05)	-0.01 (0.04)	-0.01 (0.04)	-0.02 (0.05)	0.94
Sometimes I think I am no good at all.	3809	2.55 (0.79)	2.54 (0.77)	-0.00 (0.03)	-0.05 (0.04)	0.01 (0.05)	0.00 (0.04)	0.03 (0.05)	0.09
I believe I have a number of good qualities.	3792	3.14 (0.71)	3.19 (0.69)	-0.06** (0.03)	-0.08 (0.05)	-0.08* (0.04)	-0.04 (0.03)	-0.04 (0.05)	0.68
I am able to do things as well as most children.	3814	3.31 (0.62)	3.33 (0.62)	-0.03 (0.02)	-0.05* (0.03)	-0.01 (0.03)	-0.03 (0.04)	-0.04 (0.04)	0.37
I do not have much to be proud of.	3769	2.42 (0.77)	2.43 (0.78)	-0.01 (0.03)	0.03 (0.05)	-0.07 (0.04)	-0.01 (0.05)	0.02 (0.05)	0.23
Sometimes I feel useless.	3808	3.08 (0.80)	3.08 (0.81)	-0.01 (0.03)	-0.05 (0.03)	-0.01 (0.04)	0.05 (0.04)	-0.02 (0.04)	0.05
I believe I am a valuable person, at least as much as my classmates.	3800	3.25 (0.62)	3.28 (0.64)	-0.04 (0.03)	-0.07* (0.04)	0.01 (0.04)	-0.06 (0.04)	-0.04 (0.04)	0.37
I wish I could have more respect for myself.	3747	1.96 (0.62)	1.94 (0.61)	0.01 (0.03)	0.03 (0.04)	-0.06 (0.05)	0.05 (0.04)	0.02 (0.04)	0.64
I sometimes think that I am a failure.	3806	2.98 (0.84)	2.96 (0.86)	0.02 (0.03)	-0.03 (0.04)	0.04 (0.04)	-0.04 (0.04)	0.09** (0.04)	0.12
When I think of myself, I usually think good thoughts.	3820	2.96 (0.81)	2.98 (0.82)	-0.03 (0.03)	-0.04 (0.05)	0.01 (0.05)	-0.10** (0.04)	0.01 (0.05)	0.84
Are you confident that you will be successful in the future ?	3645	0.96 (0.21)	0.97 (0.18)	-0.01* (0.01)	-0.01 (0.01)	-0.02** (0.01)	-0.01 (0.01)	-0.01 (0.01)	0.95

<u>OLS</u> specifications: Columns 4 amd 5-8 include robust standard errors clustered by school (the unit of randomization); controls for students' baseline test scores in grammar, reading, and math; and subcounty fixed effects (the stratification variables). Column 9 is the p-value of an F-test of sigificance on a regression of the cash parent treatment against all other treatments and the same specifications as in Columns 5-8. *p<0.10 **p<0.05 ***p<0.01.

Appendix Table 4f: Components of Table 7, Time Preference, Financial Independence, and Aspirations Indices, Follow-up 2011

Mean (standard deviation) and OLS

	Number of Obs.	Mean (std dev)		OLS (one specification per cell)	OLS (each row = one regression)				P-value for test of Cash Parent = Other Treatments
		Any Treatment	Control	Any Treatment	Cash w/ Parent Outreach	Voucher w/ Parent Outreach	Cash w/o Parent Outreach	Voucher w/o Parent Outreach	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Time Preference Index & Components (Follow-up Survey - 2011)									
Time Preference Index	3820	2.05 (0.83)	2.07 (0.82)	-0.02 (0.03)	-0.02 (0.04)	-0.02 (0.04)	-0.00 (0.04)	-0.03 (0.04)	0.99
Would you rather receive 500 UGX today or 800 UGX next week?	3820	1.37 (0.48)	1.37 (0.48)	-0.00 (0.02)	0.01 (0.02)	-0.01 (0.03)	0.01 (0.03)	-0.01 (0.03)	0.45
Would you rather receive 500 UGX today or 1,000 UGX next week?	2410	1.49 (0.50)	1.52 (0.50)	-0.03 (0.02)	-0.06* (0.03)	-0.00 (0.03)	-0.02 (0.03)	-0.03 (0.03)	0.29
Financial Independence Index & Components (Follow-up Survey - 2011)									
Financial Independence Index	3830	-0.04 (0.97)	0.00 (1.00)	-0.03 (0.04)	-0.05 (0.06)	-0.13** (0.06)	0.06 (0.06)	-0.00 (0.05)	0.65
How much money do you think you will get in the next 7 days? winsorized at 99%	3643	2245.60 (4225.71)	2399.59 (4587.07)	-108.12 (167.45)	-198.11 (217.85)	-449.73* (248.81)	242.09 (252.49)	-18.71 (242.72)	0.59
How much money did you get in the past 7 days? winsorized at 99%	3830	1957.95 (3332.84)	2038.95 (3464.53)	-50.81 (118.34)	-96.29 (194.09)	-412.40** (188.15)	308.69 (188.99)	1.97 (153.16)	0.71
How much pocket money are you given to spend as you wish? winsorized at 99%	3830	4394.88 (7170.65)	4584.16 (7246.93)	-210.99 (283.78)	-346.28 (360.50)	-443.56 (415.79)	-10.95 (534.00)	-49.41 (430.67)	0.73
Aspirations Index & Components (Follow-up - 2011)									
Aspirations Index	3830	-0.01 (1.04)	0.00 (1.00)	-0.03 (0.04)	-0.05 (0.06)	-0.03 (0.06)	0.02 (0.04)	-0.04 (0.06)	0.54
Do you think you will go to secondary school?	3691	-0.05 (1.11)	-0.00 (1.00)	-0.06 (0.04)	-0.10 (0.06)	-0.03 (0.06)	-0.00 (0.04)	-0.09 (0.06)	0.37
Do you think you will reach university?	3054	-0.05 (1.04)	-0.00 (1.00)	-0.06 (0.04)	-0.06 (0.06)	-0.10* (0.06)	-0.01 (0.06)	-0.09 (0.06)	0.96
If you graduate from primary school, will your life be better than if you hadn't graduated?	3830	0.05 (0.94)	-0.00 (1.00)	0.04 (0.03)	0.08 (0.05)	-0.00 (0.04)	0.06 (0.05)	0.04 (0.05)	0.26
What do you want to be when you grow up? (student responded with career that requires higher education)	3830	0.02 (0.98)	0.00 (1.00)	0.01 (0.03)	-0.05 (0.04)	0.05 (0.05)	0.00 (0.05)	0.01 (0.04)	0.08

OLS specifications: Columns 4 amd 5-8 include robust standard errors clustered by school (the unit of randomization); controls for students' baseline test scores in grammar, reading, and math; and subcounty fixed effects (the stratification variables). Column 9 is the p-value of an F-test of sigificance on a regression of the cash parent treatment against all other treatments and the same specifications as in Columns 5-8. *p<0.10 **p<0.05 ***p<0.01.

Appendix Table 5-A: Repeat of Table 4-A, without controls for baseline test scores

Mean (standard deviation) and OLS

Dependent Variables	Number of Obs.	OLS (one specification per cell) Any Treatment	OLS (each row = one regression) Cash w/ Parent Outreach	Voucher w/ Parent Outreach	Cash w/o Parent Outreach	Voucher w/o Parent Outreach	P-value for test of Cash Parent = Other Treatment	P-value for test of Cash Parent = Voucher
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Panel A: Savings Process Outcomes (Self-reported in Student Follow-up Survey - 2011)								
Heard of Super Savers Program	3831	0.67***	0.69***	0.67***	0.69***	0.64***	0.26	0.64
		(0.02)	(0.02)	(0.03)	(0.02)	(0.03)		
Ever Talked with Parents about Saving?	3829	0.15***	0.15***	0.14***	0.17***	0.16***	0.78	0.65
		(0.02)	(0.03)	(0.03)	(0.03)	(0.03)		
Saved with Super Savers	3832	0.40***	0.42***	0.39***	0.44***	0.35***	0.37	0.38
		(0.02)	(0.02)	(0.04)	(0.03)	(0.04)		
Ever Saves Money	3829	0.00	0.00	0.02	0.02	-0.03	0.86	0.37
		(0.02)	(0.02)	(0.03)	(0.03)	(0.02)		
Primary Source of Savings was Work	3838	-0.04**	-0.07**	-0.04	-0.00	-0.05**	0.23	0.56
		(0.02)	(0.03)	(0.03)	(0.03)	(0.02)		
Any Funds Saved Came from Work	3830	-0.04*	-0.05*	-0.04	-0.01	-0.05**	0.69	1.00
		(0.02)	(0.03)	(0.03)	(0.03)	(0.02)		
Any Funds Saved Came from Pocket Money from Parents Relative or Non-relative	3838	0.01	0.03	0.01	0.01	0.00	0.46	0.86
		(0.02)	(0.03)	(0.03)	(0.03)	(0.03)		
Any Funds Saved Came from Parents for the Purpose of Saving	3830	0.03***	0.04***	0.05***	0.03**	0.03**	0.75	0.58
		(0.01)	(0.01)	(0.01)	(0.01)	(0.01)		
Number of Locations Actively Used for Savings	3838	0.08***	0.08***	0.10**	0.06*	0.06**	0.70	0.49
		(0.02)	(0.03)	(0.04)	(0.04)	(0.03)		
Savings Attitude Index	3838	0.06	0.04	0.10	0.07	0.02	0.76	0.20
		(0.05)	(0.08)	(0.07)	(0.07)	(0.06)		
Student Spent Savings on School Fees or Supplies or Lunch	3824	0.07***	0.09***	0.11***	0.05**	0.04	0.45	0.22
		(0.02)	(0.03)	(0.03)	(0.03)	(0.03)		
Total Self-Reported Savings Last Term	3838	-818.88	-115.02	-1458.45*	-311.71	-1354.69**	0.23	0.24
		(503.66)	(841.61)	(765.56)	(728.09)	(595.56)		
Total Self-Reported Savings Last Term (wins 95%)	3838	-785.83***	-601.31	-1258.74***	-189.20	-1071.48***	0.53	0.50
		(280.48)	(469.38)	(443.68)	(463.91)	(341.87)		
In-school Self-Reported Savings Last Term (wins. 95%)	3838	494.71***	530.97***	412.86***	634.07***	407.92***	0.49	0.14
		(35.19)	(60.23)	(65.48)	(67.94)	(59.75)		
Out-of-school Self-Reported Savings Lasr Term (wins 95%)	3838	-1504.10***	-1391.89***	-1718.74***	-1210.45***	-1681.52***	0.69	0.65
		(287.28)	(492.93)	(457.54)	(455.60)	(349.06)		

OLS specifications: Columns 2 amd 3-6 include robust standard errors clustered by school (the unit of randomization); if available, a control for the baseline value of the dependent variable; and subcounty fixed effects (the stratification variables). Baselines values are not available for variables in this table. Column 7 and 8 are the p-value of an F-test of sigificance on a regression of the cash parent treatment against all other treatments and the voucher treatment and the same specifications as in Columns 3-6. UGX = Ugandan Shillings, 1 USD = 2815 UGX. *p<0.10 **p<0.05 ***p<0.01

Appendix Table 5-BC: Repeat of Table 4-BC, without controls for baseline test scores

Mean (standard deviation) and OLS

Dependent Variables	Number of Obs.	OLS (one specification per cell) Any Treatment	OLS (each row = one regression) Cash w/ Parent Outreach	Voucher w/ Parent Outreach	Cash w/o Parent Outreach	Voucher w/o Parent Outreach	P-value for test of Cash Parent = Other Treatmen	P-value for test of Cash w/ Parent = Voucher w/ Parent
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Panel B: Intermediate Outcomes (Classroom Visits)								
School Supplies Index 2010	813	-0.08	0.11	-0.06	-0.15	-0.22	0.05	0.24
		(0.12)	(0.12)	(0.20)	(0.22)	(0.19)		
School Supplies Index 2011	950	0.08	0.34**	0.04	-0.09	0.04	0.01	0.13
		(0.11)	(0.13)	(0.18)	(0.19)	(0.15)		
Panel C: Other Process Outcomes (Self-reported in Student Follow-up Survey - 2011)								
School Supplies Index	3838	0.01	0.11	0.01	-0.07	-0.03	0.04	0.29
		(0.05)	(0.07)	(0.06)	(0.08)	(0.06)		
School Fees	3532	-3599.66	-2493.34	-6166.48	-2406.46	-3399.93	0.80	0.65
		(2891.84)	(3063.16)	(4107.87)	(3822.66)	(3816.47)		
Cost of Most Recent Test	2348	-34.47	-67.54	91.95	-266.89	85.66	0.93	0.95
		(189.81)	(266.42)	(267.47)	(244.80)	(305.59)		
Parental Involvement Index	3838	0.01	0.04	-0.02	0.01	0.00	0.41	0.36
		(0.04)	(0.06)	(0.06)	(0.06)	(0.06)		
Primarily Used Money Earned for School Fees or Supplies	3838	0.02*	0.02	0.02	0.03	0.02	0.95	0.84
		(0.01)	(0.02)	(0.02)	(0.02)	(0.02)		
Missed School Because Sent to Look for Fees or Lack of Scholastic Materials	3582	-0.00	-0.01	-0.00	0.02	-0.01	0.68	0.90
		(0.01)	(0.02)	(0.02)	(0.02)	(0.02)		

OLS specifications: Columns 2 amd 3-6 include robust standard errors clustered by school (the unit of randomization); if available, a control for the baseline value of the dependent variable; and subcounty fixed effects (the stratification variables). Here, baseline values are available only for "School Supplies Index 2010", "School Supplies Index 2011", "School fees" and "Missed school because sent to look for fees or lack of scholastic materials" variables. Column 7 and 8 are the p-values of F-tests of sigificance on a regression of the cash parent treatment against all other treatments and the voucher w/ parent treatment and the same specifications as in Columns 3-6. UGX = Ugandan Shillings, 1 USD = 2815 UGX. *p<0.10 **p<0.05 ***p<0.01

Appendix Table 6: Repeat of Table 5, without controls for baseline test scores
Mean (standard deviation) and OLS

| | Number of Obs. | OLS (one specification per cell) | OLS (each row = one regression) | | | | P-value for test of Cash Parent = Other Treatments |
| | | Any Treatment | Cash w/ Parent Outreach | Voucher w/ Parent Outreach | Cash w/o Parent Outreach | Voucher w/o Parent Outreach | |
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Grammar	3768	0.08	0.18*	0.01	0.12	0.01	0.17
		(0.06)	(0.09)	(0.08)	(0.08)	(0.08)	
Reading	3765	0.05	0.14	-0.01	0.02	0.03	0.17
		(0.06)	(0.10)	(0.09)	(0.08)	(0.08)	
Math	3768	-0.02	0.03	-0.12	0.04	-0.03	0.36
		(0.05)	(0.08)	(0.08)	(0.06)	(0.07)	
Total	3765	0.04	0.14	-0.04	0.07	0.01	0.18
		(0.06)	(0.09)	(0.09)	(0.08)	(0.08)	

OLS specifications: Columns 2 amd 3-6 include robust standard errors clustered by school (the unit of randomization) and subcounty fixed effects (the stratification variables). Column 7 is the p-value of an F-test of sigificance on a regression of the cash parent treatment against all other treatments and the same specifications as in Columns 3-6. *p<0.10 **p<0.05 ***p<0.01

	Baseline Grammar Score	Baseline Reading Score	Baseline Math Score	Follow-up Grammar Score	Follow-up Reading Score	Follow-up Math Score
Appendix Table 7: Correlations Between Test Scores						
Baseline Grammar Score	1					
Baseline Reading Score	0.663	1				
Baseline Math Score	0.521	0.485	1			
Follow-up Grammar Score	0.628	0.595	0.415	1		
Follow-up Reading Score	0.589	0.585	0.421	0.766	1	
Follow-up Math Score	0.465	0.448	0.471	0.626	0.621	1

Appendix: Baseline and Follow-up Aptitude Tests

Innovations for Poverty Action: Project 79
BASELINE

Code ☐ ☐ ☐ ☐ ☐

P4 Baseline Aptitude Test
TIME ALLOWED: 1 hr

NAME:_____

SCHOOL: _____

DATE: _____

Section 1: Mathematics

1. What is the shaded fraction?

_____

2.   17
    x 3

_____

3.   8760
    - 6420

_____

4.   375
    + 250

_____

5. 290
    x 5

_____

6. Deborah bought a dress at 5,300 /= and a pair of shoes at 2,000 /=. How much money did she spend?

_____/=

7. What is the time?
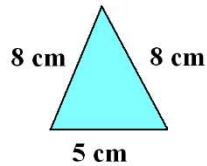
_____
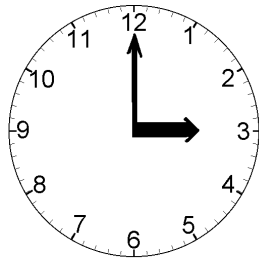
8. $15 \div 3 =$ _____

9. $8 - 10 =$ _____

10. $5 + {-1} =$ _____

11. $\frac{3}{8} + \frac{1}{8} =$ _____

12. $\frac{7}{8} - \frac{5}{8} =$ _____

13. $13 + 2.3 =$_____

47

14. Calculate the distance around the triangle.

Distance: _____ cm

Section 2: English

IN QUESTIONS 15 AND 16, COMPLETE EACH SENTENCE WITH THE CORRECT FORM OF THE WORD IN BRACKETS.

15. My sister always _____ to church on Sundays. (go)

16. I usually_____ up at 7:30 am. (wake)

IN QUESTIONS 17 – 20, COMPLETE EACH WORD

17. Bo__k   **18.** Pen__il   **19.** Tab__e   **20.** S__hool

IN QUESTIONS 21 AND 22 RE-WRITE EACH SENTENCE WITH THE OPPOSITE OF THE UNDERLINED WORD OR WORDS.

21. Some objects <u>sink</u> in water.

_____

22. The floor is <u>clean</u>.

_____

IN QUESTIONS 23 AND 24, ARRANGE THE WORDS IN ALPHABETICAL ORDER.

23. hot, egg, design, map

_____

24. bridge, bat, beat

_____

USE THE FOLLOWING WORDS TO MAKE A SENTENCE:

25. boy school a going to I saw

   _____

26. food good very restaurant The at this is

   _____

Section 3: Reading Comprehension

STUDY THE INFORMATION BELOW AND ANSWER THE QUESTIONS

Budget for Juma's Birthday Party on 29th November, 2009

ITEM	QUANTITY AND UNIT	PRICE PER UNIT	TOTAL AMOUNT
Chicken	10 birds	6,500 /= per bird	65,000 /=
Meat	10 kg	3,000 /= per kg	30,000 /=
Irish potatoes	20 kg	500 /= per kg	10,000 /=
Cooking oil	5 litres	3,000 /= per litre	15,000 /=
Charcoal	½ sack	20,000 /= per sack	10,000 /=
Soda	3 crates	11,000 /= per crate	33,000 /=
Cakes	2 cakes	300 /= per cake	600 /=

27. When is the party going to take place?

   _____

28. How many items are shown?

   _____

29. How much meat will be needed in quantity?

   _____

30. What is the price per unit of one kg of Irish potatoes?

   _____

31. What is the total amount of money that will be spent on cooking oil?

   _____

32. What is the most expensive item on the list in terms of price per unit?

   _____

33. What quantity of charcoal will be bought?

_____

READ THE STORY AND ANSWER THE QUESTIONS BELOW IN FULL SENTENCES.

Sarah is a girl in P4. Yesterday was her sister's wedding. Her whole family went to the party. Her sister had a beautiful white dress. She received many gifts. Our aunt gave her a nice mat. There was a lot of good food. Sarah ate some popcorn and some wedding cake. She did not eat any bread. There was a band and Sarah danced with her brother.

34. Which class is Sarah in?

……………………………………………………………………………………

37. Who went to the party?

……………………………………………………………………………………

38. What did Sarah eat?

……………………………………………………………………………………

39. Who did Sarah dance with?

…..………………………………………………………………………………….

Innovations for Poverty Action: Project 79
BASELINE   **Code** ☐ ☐ ☐ ☐ ☐

P5 Baseline Aptitude Test
TIME ALLOWED: 1 hr   **NAME:** _____

                                                      SCHOOL: _____

                                                      DATE: _____

Section 1: Mathematics

1. A factory produces 290 bars of soap per day and works 5 days a week. How many bars of soap will the factory produce by the end of the week?

_____ bars of soap

2. $15 \div 3 =$ _____ 3. $8 - 10 =$ _____ 4. $5 + -1 =$ _____

5.   17   6.   8760   7.   375   8. 290
         x 3   - 6420   + 250   x 5

   _____   _____   _____   _____

9. $\frac{1}{8} + \frac{1}{2} =$ _____ 10. $\frac{7}{8} - \frac{5}{8} =$ _____

11. Sarah has two 1,000 /= notes. She wants change for the same amount. Which of the following is the correct change? Circle the correct answer.
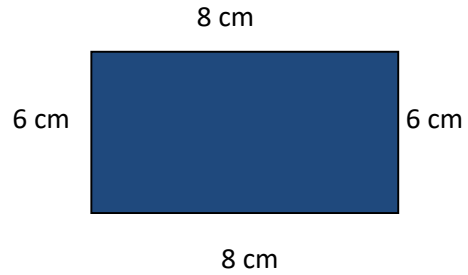
   a. Three 200/= shilling coins, two 500/= coins and seven 100/= coins
   b. Five 200/= coins, four 500/= coins and six 100/= coins
   c. Two 500/= coins, two 200 coins and six 100/= coins
   d. Three 500/= coins, three 200/= coins and four 100/= coins

12. What is the time?

_____
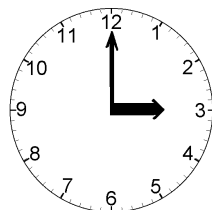
13. Calculate the perimeter of the figure.

Perimeter: _____

8 cm

6 cm ⬛ 6 cm

8 cm

Section 2: English

IN QUESTIONS 15-17, COMPLETE EACH SENTENCE WITH THE CORRECT FORM OF THE WORD IN BRACKETS.

14. There are pieces of _____ glass on the floor. (break)

15. The teacher is not here, he has _____ to town. (go)

16. My school bag is _____ than yours. (heavy)

IN QUESTIONS 17-18, RE-WRITE EACH SENTENCE WITH THE OPPOSITE OF THE UNDERLINED WORD.

17. Some objects <u>sink</u> in water.

_____

_____

18. The floor is <u>clean</u>.

_____

_____

IN QUESTIONS 19 AND 20, ARRANGE THE WORDS IN ALPHABETICAL ORDER.

19. helicopter, egg, design, map

_____

20. bridge, baby, booth, beat

_____

USE THE FOLLOWING WORDS TO MAKE A SENTENCE:
21. boy school a going to I saw

_____

22. food good very restaurant The at this is

_____

Section 3: English and Mathematics Combined

STUDY THE INFORMATION BELOW AND ANSWER THE QUESTIONS ABOUT IT IN FULL SENTENCES.

Budget for Juma's Birthday Party on 29th November, 2009

ITEM	QUANTITY AND UNIT	PRICE PER UNIT	TOTAL AMOUNT
Chicken	10 birds	6,500 /= per bird	65,000 /=
Meat	10 kg	3,000 /= per kg	30,000 /=
Irish potatoes	20 kg	500 /= per kg	10,000 /=
Cooking oil	5 litres	3,000 /= per litre	15,000 /=
Charcoal	½ sack	20,000 /= per sack	10,000 /=
Soda	3 crates	11,000 /= per crate	33,000 /=
Cakes	200 small cakes	300 /= per small cake	60,000 /=
Cakes	5 big cakes	30,000 /= per large cake	150,000 /=

23. When is the party going to take place?

_____

24. How many items are shown?

_____

25. How much meat will be needed in quantity?

_____

26. What is the price per kg of Irish potatoes?

_____

27. What is the total amount of money that will be spent on cooking oil?

_____

28. How many items will be purchased for a total amount of 10,000/= each?

_____

29. What is the most expensive item on the list in terms of price per unit?

_____

30. How much charcoal will be bought in quantity?

_____

USE THE INFORMATION IN THE PASSAGE BELOW TO ANSWER THE QUESTIONS THAT FOLLOW.

Sarah has an older brother named Edward. Tomorrow, November 8th is Edward's birthday and Sarah has decided to bake him a cake. Today she will go to the market and buy the ingredients for her cake. Tomorrow, before Edward wakes up, she will mix the ingredients and bake the cake. The cake is going to be vanilla because it is Edward's favorite flavor. Sarah prefers chocolate cakes but Edward doesn't like chocolate.

Sarah has made a list of the ingredients that she needs in order to make her cake. She will go to the market to buy them.
The cost of each of the items was:

1. eggs: 3,000 /= for a bag of 6 eggs
2. milk: 500 /= for one bag
3. flour: 2,500 /= for one bag
4. sugar: 1,500 /= for one bag
5. baking powder: 3,000 /= for one tin
6. vanilla: 2,000 /= for one bottle
7. butter: 2,500 /= for one packet

ANSWER THE FOLLOWING QUESTIONS BASED ON THE PASSAGE ABOVE. CIRCLE THE LETTER THAT CORRESPONDS TO THE CORRECT RESPONSE.

31. Who is Edward?
    a) Sarah's younger brother
    b) Sarah's cousin
    c) Sarah's older brother
    d) Sarah's friend

32. What is Sarah going to do?
    a) Buy a cake at the market
    b) Buy a present for her brother
    c) Play with her friend
    d) Buy ingredients at the market and bake a cake

33. How much will Sarah spend on sugar and flour?
    a) 3,500 /=
    b) 3,000 /=
    c) 300 /=
    d) 4,000 /=

34. How much does a bag of six eggs cost?

     a) 3,000 /=

     b) 300 /=

     c) 2,500 /=

     d) 2,000 /=

35. If Sarah gave the shopkeeper a 5,000 /= note to pay for eggs, how much balance did the shopkeeper give back to Sarah?

     a) 200 /=

     b) 4,300 /=

     c) 1,500 /=

     d) 2,000 /=

36. What kind of cake is Sarah going to make?

     a) Chocolate

     b) Vanilla

     c) Strawberry

     d) Coffee

37. What kind of cake does Sarah prefer?

     a) Chocolate

     b) Vanilla

     c) Strawberry

     d) Coffee

38. If Sarah buys everything on her list except for sugar, how much will she spend?

     a) 15,000 /=

     b) 14,500 /=

     c) 13,500 /=

     d) 13,000 /=

ID

FOLLOW UP EXAM **A**

Code

TIME ALLOWED: 1 l

NAME:_____

SCHOOL: _____

DATE: _____

Section 1: Mathematics

3. What is the shaded fraction?

_____

4.	15	**3.**	9650	**4.**	343	**5.**	290
	x 2		- 4230		+ 108		x 3

_____   _____   _____   _____

9. Samuel bought a hoe for 6,000 /= and a packet of seeds for 3,500 /=. How much money did he spend in total?

_____/=

10. What is the time?

_____
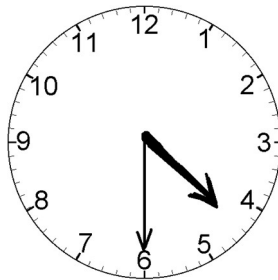
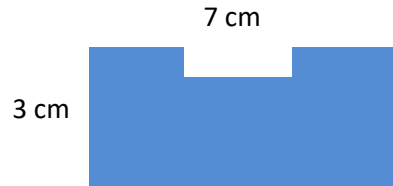**11.** $20 \div 4 =$ _____ **9.** $6 - 8 =$ _____ **10.** $4 + {-3} =$ _____

11. $\frac{5}{8} + \frac{1}{8} =$ _____ **12.** $\frac{2}{3} - \frac{1}{3} =$ _____ **13.** $11 + 3.9 =$ _____

14. Calculate the distance around the rectangle.

7 cm

3 cm

Perimeter: _____ cm

Section 2: English

IN QUESTIONS 15 AND 16, COMPLETE EACH SENTENCE WITH THE CORRECT FORM OF THE WORD IN BRACKETS.

  18. Yesterday we _____ some school supplies. (buy)

  19. My older brother is much _____ than I am. (tall)

IN QUESTIONS 17 – 20, COMPLETE EACH WORD

  20. Hou_e   **18.** L__ght   **19.** Ga_den   **20.** R_ad

IN QUESTIONS 21 AND 22 RE-WRITE EACH SENTENCE WITH THE OPPOSITE OF THE UNDERLINED WORD OR WORDS.

  35. Some plants will <u>live </u>if they are put in bright sunlight.

      _____

  36. The store <u>closes</u> at 9 o'clock.

      _____

IN QUESTIONS 23 AND 24, ARRANGE THE WORDS IN ALPHABETICAL ORDER.

  37. bucket, spent, nail, maize, house

      _____

  38. return, rain, root, railway

USE THE FOLLOWING WORDS TO MAKE A SENTENCE:

39. we our for tomorrow study test will

_____

40. very this raining morning started it early

_____

Section 3: Reading Comprehension

STUDY THE INFORMATION BELOW AND ANSWER THE QUESTIONS

Shopping List for Auma's Stall at the Market

ITEM	QUANTITY AND UNIT	PRICE PER UNIT	TOTAL AMOUNT
Tomatoes	10 kg	2,500 /= per kg	25,000 /=
Onions	5 kg	1,000 /= per kg	5,000 /=
Irish potatoes	20 kg	500 /= per kg	10,000 /=
Green pepper	2 kg	1,000 /= per kg	2,000 /=
Carrots	7 kg	2,500 /= per kg	17,500 /=
Cooking oil	5 litres	3,000 /= per litre	15,000 /=
Charcoal	½ sack	20,000 /= per sack	10,000 /=
Spices	10 bags	500 /= per bag	5,000 /=

41. What is the shopping list for?

_____

42. How many items are shown?

_____

43. What quantity of cooking oil will be bought?

_____

44. What is the price per unit of one kg of Irish potatoes?

_____

45. What is the total amount of money that will be spent on tomatoes?

_____

46. What is the most expensive item on the list in terms of price per unit?

_____

47. What quantity of spices will be bought?

_____

READ THE STORY AND ANSWER THE QUESTIONS BELOW IN FULL SENTENCES.

Juma is 12 years old. He has four brothers and three sisters. Everyone in Juma's family helps around the house, except for his youngest sister, Mary, who is only two years old and is too young to work. Juma's favorite thing to do is work in the garden because he likes to see things grow. He is growing tomatoes, cassava and beans. He gets up very early in the morning to go to the garden.   Juma also likes to go fishing with his brother. They sell what they can catch at the market.

48. How old is Juma?

………………………………………………………………………………………

35. Who is Mary?

………………………………………………………………………………………

36. What is Juma's favorite thing to do?

………………………………………………………………………………………

37. What does Juma like to do with his brother?

……..……………………………………………………………………………….

Innovations for Poverty Action: Project 79

FOLLOW UP EXAM **B**

ID

Code

TIME ALLOWED: 1 h.

NAME: _____

SCHOOL: _____

DATE: _____

Section 1: Mathematics

3. A factory produces 170 bars of soap per day and works 5 days a week. How many bars of soap will the factory produce by the end of one week?

_____ bars of soap

4. $20 \div 4 =$ _____   3. $7 - 10 =$ _____   4. $4 + -2 =$ _____

5.   14   6.   6369   7.   394   8. 512
      x 4   - 3227   + 230   x 3

   _____   _____   _____   _____

9. $\frac{2}{3} + \frac{1}{3} =$ _____   10. $\frac{5}{8} - \frac{3}{8} =$ _____

12. Moses has one 5,000 shilling note. He wants change for the same amount. Which of the following is the correct change? Circle the correct answer.
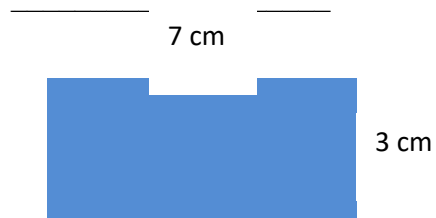
   a. Two 1000 shilling notes, three 500 shilling coins, five 200 shilling coins
   b. Three 1000 shilling notes, four 500 shilling coins
   c. Four 1000 shilling notes, four 500 shilling coins
   d. One 1000 shilling note, four 500 shilling coins, five 200 shilling coins

13. What is the time?

_____   _____
7 cm
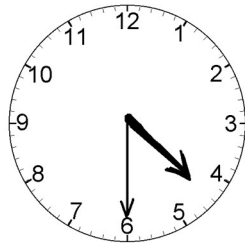
31. Calculate the distance around the figure.

Area: _____

3 cm

Section 2: English

61

IN QUESTIONS 14-17, COMPLETE EACH SENTENCE WITH THE CORRECT FORM OF THE WORD IN BRACKETS.

32. If you aren't careful, the water _____ on the ground. (spill)

33. Yesterday our teacher _____ to the town council for a meeting. (go)

34. My older brother is much _____ than I am. (tall)

IN QUESTIONS 17-18, RE-WRITE EACH SENTENCE WITH THE OPPOSITE OF THE UNDERLINED WORD.

35. Some plants will <u>live</u> if they are put in bright sunlight.

_____

_____

36. The store <u>closes </u>at 9 o'clock.

_____

_____

IN QUESTIONS 19 AND 20, ARRANGE THE WORDS IN ALPHABETICAL ORDER.

37. bucket, spent, nail, maize, house

_____

38. return, rain, root, railway

_____

USE THE FOLLOWING WORDS TO MAKE A SENTENCE:
39. we our for tomorrow study test will

_____

40. very this raining morning started it early

_____

Section 3: English and Mathematics Combined
STUDY THE INFORMATION BELOW AND ANSWER THE QUESTIONS ABOUT IT IN FULL SENTENCES.

Shopping List for Auma's Stall in the Market

ITEM	QUANTITY AND UNIT	PRICE PER UNIT	TOTAL AMOUNT
Tomatoes	10 kg	2,500 /= per kg	25,000 /=

Onions	10 kg	1,000 /= per kg	10,000 /=
Irish potatoes	20 kg	500 /= per kg	10,000 /=
Green pepper	2 kg	1,000 /= per kg	2,000 /=
Carrots	7 kg	2,500 /= per kg	17,500 /=
Cooking oil	5 litres	3,000 /= per litre	15,000 /=
Charcoal	½ sack	20,000 /= per sack	10,000 /=
Spices	10 bags	500 /= per bag	5,000 /=

41. What is the shopping list for?

_____

42. How many items are shown?

_____

43. What quantity of cooking oil will be bought?

_____

44. What is the price per kg of Irish potatoes?

_____

45. What is the total amount of money that will be spent on tomatoes?

_____

46. What is the most expensive item on the list in terms of price per unit?

_____

47. The total amount spent will be greatest for which item?

_____

48. For how many items will 10 kg be bought?

_____

USE THE INFORMATION IN THE PASSAGE BELOW TO ANSWER THE QUESTIONS THAT FOLLOW.

Godfrey's mother is sick, so Godfrey is going to go to town to buy the things that she needs. First he will go to the market and then he will go to the pharmacy. Godfrey's mother gave him a list of the things he needs to buy and how much they cost. He is going to buy things to make tea

at the market and then to buy medicine for his mother at the pharmacy. He is also going to buy some oranges because they are very nutritious and good for people who are sick.

The cost of each of the items was:

8. milk: 700/= for one bag
9. sugar: 2,500 /= for one bag
10. tea: 2,000 /= for two bags
11. oranges: 4,000 for one kilogram
12. medicine tablets: 3,000 for one box

ANSWER THE FOLLOWING QUESTIONS BASED ON THE PASSAGE ABOVE. CIRCLE THE LETTER THAT CORRESPONDS TO THE CORRECT RESPONSE.

31. Where is Godfrey going to go?

    a) Garden

    b) Town

    c) School

    d) Medical clinic

32. Which place is Godfrey going to go first?

    a) Pharmacy

    b) Market

    c) School

    d) Medical clinic

33. How much will Godfrey spend on sugar and tea?

    a) 4,500 /=

    b) 3,000 /=

    c) 700 /=

    d) 2,700 /=

34. How much does a one bag of tea cost?

    a) 1,000 /=

    b) 500 /=

    c) 700 /=

    d) 2,000 /=

35. If Godfrey gave the pharmacist a 5,000 /= note to pay for the box of medicine, how much balance did the pharmacist give back to Godfrey?

    a) 200 /=

    b) 4,300 /=

    c) 1,500 /=

    d) 2,000 /=

36. What is Godfrey going to make with what he buys in the market?

    a) A cake

    b) Medicine

    c) Coffee

    d) Tea

37. Why is Godfrey going to buy oranges?

    a) He likes how they taste

    b) They are nutritious and good for people who are sick

    c) They are his mother's favorite fruit

    d) They are in season

38. If Godfrey buys everything on his list, except for oranges, how much will he spend?

    a) 2,000 /=

    b) 7,500 /=

    c) 8,000 /=

    d) 8,200 /=