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ABSTRACT

We experimentally test the impact of expanding access to basic bank accounts in Uganda, Malawi, and Chile. Over two years, 17%, 10%, and 3% of treatment individuals made five or more deposits, respectively. Average monthly deposits for them were at the 79th, 91st, and 96th percentiles of baseline savings. Survey data show no clearly discernible intention-to-treat effects on savings or any downstream outcomes. This suggests that policies merely focused on expanding access to basic accounts are unlikely to improve welfare noticeably since impacts, even if present, are likely small and diverse.

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1 Introduction

Bank accounts are essential to daily economic life in developed countries, but are still far from universal in developing countries: only 54% of adults in developing countries report having a bank account, compared to 94% in OECD countries (Demirgüç-Kunt et al. 2015). Instead of using banks, people save in more informal ways such as keeping cash at home, which may be costly or risky and which may make many transactions inconvenient. Many governments and donors believe that there are benefits to moving people into formal banks: in recent years, groups such as the World Bank, the International Monetary Fund, the United Nations, and the Alliance for Financial Inclusion, have put forward goals at the country and institutional level for access to financial services.

There are several important factors which constrain bank account usage in developing countries. First, bank accounts tend to be expensive. For example, in our study countries of Malawi and Uganda, yearly maintenance fees have been reported as being over 20% of GDP per capita (Beck et al. 2008).[1] Accounts may have other non-pecuniary opening costs as well, for instance if people do not know how to fill out the paperwork to open a bank account or are intimidated to enter a formal financial institution. Second, bank accounts may be of low quality on other dimensions, such as long transaction queues, far distance to branches, and short or unpredictable operating hours (Dupas et al. 2012). Third, people may not trust banks (e.g., Dupas et al. 2012; Bachas et al. 2016). Fourth, consumers may be too poor to generate sufficient financial savings to warrant bearing the transaction costs. Fifth, bank account product and marketing designs may lack tailoring to behavioral constraints, such as planning fallacies, inattention, and time inconsistent preferences.[2]

We examine the effect of removing the first barrier (financial costs and administrative hassle) for unbanked households. A strength of this study is that the same experiment was conducted simultaneously in three countries (Malawi, Uganda, and Chile), with approximately 2,000 respondents in each country. The savings accounts offered in each country were similar: we facilitated the opening of basic, "no frills" accounts, offering minimal interest. We covered all opening and maintenance fees, so that the accounts were completely free

[1] These high fees may be due to several factors, including that banks find it hard to profitably lend to creditors in countries where credit markets and credit bureaus are less developed, that overhead costs are proportionally higher in developing country markets where balances held with banks are low, or that competition among banks is limited.

[2] See Karlan et al (2014) for a review of constraints to saving in developing countries.

to study participants.[3] The three countries in our study offer interesting contrasts because they are at starkly different stages of development and banking access: GDP per capita in 2014 was $253 in Malawi, $677 in Uganda, and $14,520 in Chile (World Bank 2014),[4] while the percentage of households which had an account at a financial institution was estimated for 2014 at 16% in Malawi, 28% in Uganda, and 63% in Chile (Demirgüç-Kunt et al. 2015).

In each country, we selected study sites around the catchment area of existing banks. Since we sought to work with initially unbanked households, we worked in rural areas in which bank access was lower (the rural population makes up approximately 84% of the population in Uganda and Malawi, and 11% in Chile). Any household that did not already have an account at a bank or another financial institution at baseline was eligible for the study. As would be expected, the percentage of people without accounts was starkly different in Chile than in the African sites: while 85% of people in Malawi and 77% of people in Uganda did not have accounts, the figure was only 26% in Chile. Our study sample therefore consists of individuals who live close enough to existing banks to potentially use them, but who had not chosen to open accounts on their own before the program (presumably due to financial or other barriers).

In Malawi and Uganda, we partnered with banks which offered basic savings accounts with substantial account opening and maintenance fees. The experiment waived all these fees for two years, and offered assistance with filling out the paperwork required to open an account. In Chile, we partnered with a bank which already offered an account with no opening or maintenance fees.[5] Despite there being no financial barriers in Chile, qualitative evidence collected for the study suggested that some people were not familiar with the account opening and usage procedures; in that site, we therefore decided to facilitate account opening by helping potential participants with paperwork. Nevertheless, we would expect lower barriers to account opening in Chile.

The rate of account opening among treatment households was 69% in Malawi and 54% in Uganda, but was only 17% in Chile where access to banks is higher. A much smaller percentage actually used the accounts: within two years of follow-up, 10% of households made at least five deposits in Malawi, 17% in Uganda, and just 3% in Chile. Among these households, however, usage was substantial: the mean total amount deposited by active users was $647 in Malawi, $528 in Uganda, and $1,858 in Chile.[6] Averaged across the entire treatment group, the amount deposited per household was $3, $4, and $4 per month,

[3]These sorts of accounts have been advocated in many developing countries, for example as mandated by the Reserve Bank of India.

[4]The World Bank classifies Malawi and Uganda as low-income and Chile as high-income.

[5]The bank did charge withdrawal fees and also deposit fees after the 5th deposit in a given month.

[6]All USD figures are provided in 2010 USD.

respectively. These amounts are not trivial for Malawi and Uganda (where average monthly individual expenditures are about $15 and $30 per month, respectively), but they are tiny in Chile, where average monthly household expenditures are about $250 per month.

Even in Malawi and Uganda, as can be seen from the take-up figures, any effects would have to be driven by the minority of active users – were there enough users to observe treatment effects? Pooling the three waves of follow-up data, we find that monthly deposits into formal financial institutions increase for the treatment group by about 0.5% of monthly income in Malawi and 2.0% in Uganda, compared to the comparison group. While these small average (intent-to-treat) effects are not surprising since the great majority of people did not actively use the account, we note that under-reporting of bank savings appears non-trivial in survey data, especially in Malawi, where average deposits in the last month are about $0.55 in the survey data (for those with an account) compared to $1.77 in the administrative data (for Uganda these figures are $2.13 and $2.94, respectively).

Where did the money saved in the bank account come from? One would expect that some of the money put in the bank accounts was a reshuffling of money from other sources, in particular money saved at home. Estimating crowd out of home savings is challenging, since people are reluctant to reveal how much money they keep in cash to an enumerator, especially in a face to face interview in the home. Consequently, many studies simply do not ask about home savings (i.e. Dupas and Robinson 2013a). In this study, however, we extensively pre-tested modules aimed in part to measure home savings. One key addition is that we measured savings *balances*, in addition to *flows*. While balances have the major disadvantage of missing much of the action, we found flows to be more problematic in such settings, since transactions are few and far between and therefore occur outside the look-back period of the survey.

The balance data shows an increase in mean bank balances of $3.9 in Malawi and $8.8 in Uganda for the treatment group. About 50% of this increase appears to be crowd out: informal savings (which we define as savings at home, in savings groups, and savings with friends/family) declined by around $2.5 in Malawi and $4 in Uganda (with the bulk of the decline in cash savings), leaving an overall treatment effect on total savings of $1.4 in Malawi and $4.8 in Uganda. Compared to the control group mean for total savings of about $14 in Malawi and $41 in Uganda, this amounts to an approximately 10% increase in total savings balances in both countries, but this result is not statistically significant in Malawi and only significant in Uganda when we trim outliers and control for the baseline value. The results for savings flows show a similarly noisy picture. We expect that this sort of crowd out of cash savings was also present in earlier studies but not measured. Overall we find at best very weak evidence for an effect on total savings.

Finally, we look at a host of downstream outcomes, such as business inventory, expenditures, educational investments and health investments (we conducted follow-ups in Uganda and Malawi only, since the 3% usage rate in Chile would make it nearly impossible to observe any impacts). Unsurprisingly given the lack of a clearly discernible average treatment effect on savings, we find no average effect on any of these outcomes. Effects for the small minority of active users may be too small to generate an impact on average. Furthermore, those who did use the accounts had a variety of reasons for saving, and therefore the effects are diffuse across several channels and their corresponding downstream outcomes. Nevertheless, our results highlight how the basic accounts offered did not produce beneficial treatment effects on average for the representative unbanked household in any of the three countries, whereas other studies, which we will discuss, have found that more specialized or more targeted accounts can at times generate positive average treatment effects.

What prevents more people from using basic accounts? Our evidence suggests different explanations between the two poorer African sites and the more developed Chilean site. In Malawi and Uganda, the constraint seems to be poverty: in follow-up surveys, 89 and 80% of households responded that they did not use the accounts because they did not have enough money to save. This is consistent with the rest of our data, which suggests that people are living well below the global poverty line and living essentially hand to mouth with virtually no savings (respondents in the comparison group report holding a *total* of only $14 in Malawi and $41 in Uganda in cash savings). Indeed, we find that baseline wealth and education predict usage, suggesting that people with more slack in their budgets save more. In Chile, survey evidence shows that being unbanked (which is much more common among the elderly) is primarily a choice: in that country, store credit is ubiquitous and the social safety net is fairly generous in comparison to the African sites (particularly in the form of pensions and health insurance), so there is relatively little need to save individually, and people indeed report not needing to save.

There are other important reasons for low usage. We find strong evidence that people who live further from the bank branches used the accounts less, in both Malawi and Uganda. Another issue is that the accounts offered virtually no interest, even though inflation was high (14.0% in Malawi during the study period, and 10.7% in Uganda). In fact, Malawi went through a major currency devaluation during this time period, in which the Kwacha devalued by approximately one third. Nevertheless, while important, these were less cited reasons for low usage, compared to the simple fact of low incomes.

The pattern of usage we observe in our two African sites is similar to several previous studies in rural Kenya (Dupas and Robinson 2013a, Dupas, Keats and Robinson 2015), which both find that a majority of initially unbanked households never use accounts they

are offered but that usage among a subset of active users is substantial. A major difference here, however, is that there was not enough usage among active users to generate statistically significant treatment effects on any downstream outcomes. By contrast, the Chile results suggest a much lower demand for bank accounts among currently unbanked households. To take stock of these varied findings, we discuss (and include an extensive table) comparing the target samples, features, usage and primary impacts found in 16 completed randomized trials of savings products in 13 countries. There is too much heterogeneity in sampling and product design, as well as what is meant in practice by each product design feature, to conduct a formal meta-analysis. However, one pattern does emerge: few products appeal to more than a small minority. Rather than simply expanding access to basic services, expanding access to a wide variety of products catering to many different needs may thus be needed to generate noticeable welfare impacts.

2 Background, Experimental Design and Data

2.1 Study sites

This study took place in two low-income African countries (Malawi and Uganda) and the higher income Latin American country of Chile. These countries are at very different levels of economic and financial sector development: GDP per capita is $253 in Malawi, $677 in Uganda, and $14,520 in Chile (World Bank 2014), while the percentage of adults with an account at a financial institution remained stagnant at 16% in Malawi between 2011 and 2014, and increased from 20 to 28% in Uganda, and from 40% to 63% in Chile over that time period (Demirgüç-Kunt et al. 2015). In Malawi and Uganda, censuses were conducted in 2010, accounts were opened in 2011, and follow-up surveys were conducted until 2012-13. In Chile, the census and account opening were conducted in parallel (in 2010-11), and no follow up was conducted. Web Appendix Figure WA1 presents a timeline for study activities.

Within each country, we partnered with banks in rural areas where we expected a large share of the population to be unbanked. We worked in the Balaka and Machinga districts in Southern Malawi; the Bukomansimbi and Kalungu districts in Central Uganda; and the Temuco region in Southern Chile.[7]

In each country, nominal interest rates on the bank accounts were low, so that real interest

[7]The specific choice of study site was made based partly on priors about banking access and partly for logistical reasons. In Malawi, we chose to work in the Southern Region because a 2008 FinScope survey highlighted the region as having the country's lowest average savings rates. In Uganda, we chose the Masaka region for convenience (it was not too far from IPA's offices but was not part of the peri-urban area around Kampala). Finally in Chile, we chose the Temuco region because it is one of the poorest regions in the country.

rates were actually negative. Over the study period of 2010-13, the average annual inflation rate was 3.7% in Chile, 10.7% in Uganda, and 14.0% in Malawi (World Bank 2015). Also of importance is that during our sample period, the Malawian central bank devalued the currency by 34% in May 2012 (Al Jazeera 2012).[8]

2.2 Partner banks

In each site, we partnered (through IPA / J-PAL) with a financial institution and selected rural areas in which the partnering institution operated. Each site started with a listing of households, from which households were randomly drawn for inclusion in the study, and assignment to treatment and control. More details on the sampling and randomization procedures are provided below, site by site.

In Uganda, we were unable to find a formal banking institution without prohibitive fees in rural areas,[9] so we instead partnered with a Savings and Credit Cooperative (SACCO) called MAMIDECOT (an acronym for the Masaka Microfinance & Development Cooperative Trust). Originally founded in 1999, and incorporated with the Ugandan Ministry of Tourism, Trade and Industry, MAMIDECOT is a local cooperative owned by its shareholder "members."[10] We worked with three of the four branches, each located in a different trading center. MAMIDECOT offers basic savings accounts which pay no interest unless balances exceed $8.50, in which case the interest rate is 3% (as mentioned above, average inflation over this time period was about 10% per year). The total cost of opening an account is high – about $15.[11] The accounts also featured monthly maintenance fees of approximately $0.20 per month, but had no withdrawal fees (this maintenance fee was later doubled to $0.40 per month during our study period). These fees are all quite substantial relative to monthly expenditures of around $30. Deposits and withdrawals can only be made in person at the bank during standard bank hours (no ATM cards available).

In Malawi, we partnered with NBS, one of Malawi's 13 commercial banks. As of early 2013, it had branches or agencies in 37 locations and 73 ATM locations. We worked with two branches of the bank, in Liwonde and Balaka.[12] NBS offers basic savings accounts with

[8]Exchange rates at the start of the study in 2010 were 478 Chilean Pesos, 2,290 Ugandan shillings, and 150 Malawian Kwacha to US $1.

[9]The only bank with branches in rural areas was the Post Office Bank, but requirements to open an account were prohibitive.

[10]At the onset of the study, it had over 11,500 members serviced by four branches.

[11]This $15 fee includes $4.25 for a membership fee, $8.50 for two shares, and $2.25 for a passbook. In addition, a minimum balance of $4.25 is required to keep the account open.

[12]The Liwonde branch was opened in 2004 and in 2010 had 7,000 accounts; by 2013 it had a total of 12,000 accounts. The Balaka branch opened in March, 2010 and after 9 months of operation, it had 1,475 accounts. By February 2013, it had 4,322 accounts.

a 4.5% annual interest rate paid on balances of $33 or higher. There are no costs to open an account. The minimum balance to keep the account open was $3.50 at the start of the study but was raised to $8.2 within 2 years. Monthly maintenance fees started at approximately $0.50 per month but were raised three times within our study period to a total of $0.64 per month within 2 years. There are no withdrawal fees for withdrawals made at the teller, but there is a $0.40 fee for withdrawals made using an ATM card (the ATM card itself costs about $7 – both branches have 24 hour ATM access). Again, these fees are quite sizeable compared to monthly expenditures of about $15 per month.

Finally, in Chile, we partnered with BancoEstado, the only public commercial bank and the third largest bank in Chile. BancoEstado offers an account with no opening or maintenance fees called the "CuentaRUT" which every Chilean with a national Chilean ID/tax number (the "RUT") is eligible for. Despite the fact that CuentaRUT accounts are free, their take-up is low among those who live in small towns or villages lacking a bank branch. In 2010, to increase inclusion, BancoEstado facilitated access by allowing account holders to make transactions at retailer stores, through a point of sale (POS) machine (similar to a debit card machine) called Caja Vecina. Account holders can make deposits, withdrawals, and pay bills through the Caja Vecina.[13] However, people who do not have an account must first visit the bank branch to fill out the necessary paperwork.

2.3 Sampling and Randomization

The details of the sampling procedure in each country are provided in the appendix. We present a brief summary here.

In Uganda and Malawi, a census exercise was conducted in the catchment areas of the partner banks to identify unbanked households. In Malawi we additionally conducted a census at six market centers to oversample households with at least one member involved in an occupation other than farming.

As expected most households were unbanked in these areas – 74% of households in Uganda and 85% in Malawi were unbanked. Of the sample of unbanked households, we applied several exclusion criteria. While these differed somewhat across sites, the most important criteria were removing households in which both spouses were likely working for a wage, households which were deemed too far away from the banks to use them regularly, and households with no female head (see appendix for the full list of exclusion criteria and for more details). Our study sample includes 2,160 households in Uganda and 2,107 households in Malawi.

[13]While deposits (up to 5 per month), purchases and payments are free of cost, withdrawals are charged $0.62 per transaction. The same cost applies to deposits after the 5th deposit in a given month.

In both countries, 50% of the households in the sample were randomly allocated (only one individual per household) to receive the bank account subsidy. In Uganda, randomization was stratified by gender, occupation[14] and bank branch (recall there were 3 branches in the study). In Malawi, randomization was stratified by gender, occupation,[15] marital status, literacy, bank branch, and whether the respondent was from the household or market sample.

Chile differed methodologically from the other sites in that the census exercise was not representative of the entire region. Instead, enumerators went door-to-door until they reached a sample size of nearly 2,000 eligible individuals. A door-to-door census exercise was conducted in 48 Comunas of Region IX in Southern Chile. During that census exercise, 9,985 respondents were interviewed, out of which 74% already had bank accounts (either the respondent or spouse). Of the 2,472 respondents without a bank account, 1,975 were willing to enroll and complete a baseline survey. Among those eligible and enrolled in the study, half were selected to receive procedural assistance for the intervention. Treatment group was assigned based on the last digit of the RUT: odd numbers were assigned to treatment, and even numbers to the control group. Because this was done in the field at the end of the baseline survey, treatment was not stratified on any characteristics.

2.4 Bank account subsidy offer

In all sites, respondents were given the opportunity to open accounts with no financial costs. In Malawi and Uganda, account opening and maintenance fees were waived, and so was the minimum balance requirement.[16] Treatment respondents were given a voucher that could be redeemed for the free account at the bank branch. To open an account, respondents also needed three passport photos and needed to have their identity certified by the local village council. To remove the cost of getting the photos and minimize the hassle of the identity certification, account marketers facilitated this process by offering vouchers for free passport pictures and by obtaining letters of certification from the local council for the entire "treatment" sample. In Chile, where accounts were already free, households were given assistance in filling out the necessary paperwork to open accounts. Below we provide further details on the specifics of the bank account subsidy country by country.

[14]The occupation categories were classified as employee, self-employed: vendor, business owner, trader; or farmer: including animal rearing, and housewife or unemployed.

[15]The occupation categories were classified as employee, vendor, business owner, trader/farmer or animal rearing, cash crop farmer, and housewife or unemployed.

[16]IPA compensated partner banks for the lost fees and balances.

Uganda Individuals in the treatment group were visited by agents of MAMIDECOT, four to five months after the baseline.[17] The agents gave some basic information about MAMIDECOT and the accounts, and also explained that the accounts normally featured various fees that would be waived for the study period. At the conclusion of the visit, the agents gave respondents a voucher which could be brought to MAMIDECOT and redeemed for a free account (these vouchers expired after 4 months). Beneficiaries of the free account were informed that the monthly maintenance fees would be waived for a total of 21 months, after which the promotion would end and account holders would be responsible for the fees. In practice the promotion ended in March, 2013, 24 months after vouchers were distributed. Out of the 1,080 individuals assigned to receive a voucher, 94% accepted the voucher[18], and 54% opened an account.

Malawi The procedure in Malawi was largely the same as in Uganda. Individuals in the treatment group were visited by a NBS agent, were given some basic information about NBS and the accounts, and were told that the accounts normally featured various fees that would be waived for the study period.[19] At the conclusion of the visit, the agents gave respondents a voucher (which also expired after 4 months) which could be brought to NBS and redeemed for a free account. Beneficiaries of the free account were informed that the monthly maintenance fees would be waived for a total of 18 months, after which the promotion would end and account holders would have to cover it on their own. In practice voucher distribution happened in June/July 2011, and the promotion ended in June 2013, 24 months later. Out of the 1,053 assigned to the voucher, 89% accepted the voucher[20] and 69% opened an account.[21]

[17]These agents were employed jointly by IPA and MAMIDECOT, but they introduced themselves as employees of MAMIDECOT when interacting with respondents at this visit (the visit was presented as part of a campaign to attract new customers). This was done to minimize the risk of social desirability bias in the follow-up surveys, which were carried out by IPA enumerators.

[18]Of the 68 people who did not accept the voucher, 51 were not interested in the program and 17 were never found (12 people had moved outside the study region, 1 person had died, and 4 people were untraceable).

[19]As in Uganda, the agents were jointly employed by IPA and NBS but introduced themselves as NBS agents, conducting a new customer campaign. They did mention that the fee waiver was sponsored by a non-profit (the Bill and Melinda Gates Foundation), however. Follow-up surveys were conducted by IPA enumerators.

[20]Of those who did not accept the account offer, 69 were not interested and the rest could not be located.

[21]In Uganda and Malawi, enumerators visited all households in the treatment group for a "study closure" survey during which we reminded respondents that the fee waiver on the accounts was ending, so that respondents who chose to keep their account open would have to start paying the fees. As discussed in more detail below, usage of the accounts was quite low on average. Enumerators reminded them of the fees and offered procedural assistance to close the account if they wanted to avoid fees.

Chile At the end of the baseline survey, individuals sampled for the treatment were informed (by the JPAL enumerator conducting the survey) of the existence and of the main features of the CuentaRUT account and were invited to open an account with BancoEstado. Any respondent who was interested in an account received assistance with the account opening process. In particular, the enumerator helped respondents fill the application form and delivered the forms to BancoEstado. Participants were told that they would get an answer from the bank in 20 days and that they would need to go in person to one branch of the bank in order to activate the account. In total, 938 households were offered an account. Of this group, only 17% signed up and activated their account within a few months.

2.5 Data

2.5.1 Baseline surveys

In Uganda and Malawi, the baseline surveys included modules on demographics and socio-economic status, income, agricultural inputs and outputs, assets, expenditures, savings, social transfers, cognitive ability, and time and risk preferences. In Chile, we used a shorter baseline survey that focused on household demographics, participant's socio-economic characteristics, and sources of income, expenditures and credit.

2.5.2 Follow-up Surveys

In Uganda and Malawi, we conducted three rounds of follow-up surveys, administered approximately 6, 12, and 18 months after accounts were opened. The follow-up surveys were similar across rounds, and to the baseline (which allows us to control for baseline values of most dependent variables in the empirical analysis).

Besides standard outcomes already examined in previous work, a special point of emphasis in the surveys was the measurement of savings across multiple sources. In any savings study, one would expect that at least part of the increase in bank savings would come from moving cash from other places (i.e. crowd out). In our context, the most natural source of crowd out would be from saving money at home, which is typically hard to measure (especially with surveys conducted face-to-face, in the home or business where the money may be kept). We extensively piloted modules to measure such savings, asking both about savings stocks and flows. While there may still be under-reporting on this measure, we are better positioned to quantify crowd out and to gauge impacts on total savings than previous work.

Attrition in the follow-up surveys is fairly low and uncorrelated with treatment status. Our regressions include all respondents who completed at least one follow-up survey (97% of sample). Attrition on this measure is uncorrelated with treatment (See Web Appendix Table

WA1).[22] In addition, the composition of those who completed at least one follow-up survey is not different in treatment versus control (the p-value from an F-test for compositional attrition difference is 0.71 in Uganda and 0.33 in Malawi.). Consequently, Web Appendix Table WA2 shows that the respondents who remain in the sample post-attrition have very similar characteristics as the pre-attrition sample, and are balanced between treatment and control. Web Appendix Table WA3 examines attrition round-by-round, and also finds similar attrition rates across treatment groups (of about 6-8 percentage points).

In Chile, given the low take-up rate of the bank accounts, we did not conduct full follow-up surveys to measure impact. Instead, we conducted qualitative follow-ups with a subsample to understand reasons why people chose not to open accounts.

2.5.3 Administrative account data

We also have administrative data from banks on account activity. However, in Chile, the bank was not willing to release ID numbers for the bank data, so we are not able to merge the data to our other surveys (and so instead have de-identified individual data). The data covers 24 months in Uganda, 22 months in Malawi, and 17 months in Chile.

2.6 Sample Characteristics

Table 1 presents baseline characteristics for the follow-up sample, by treatment status and for each study site, together with the p-values for the tests of equality between the treatment and control means. As expected, the treatment and control groups are balanced along most characteristics.

The summary statistics also highlight key differences between the two East Africa sites and the Chile site. The Uganda and Malawi sites are much poorer and younger, reflecting differences in both the sampling strategy (we conducted door to door visits in Chile during working hours, in a country in which many people have formal employment and were not likely to be home) and in banking access (Chile has much higher bank account ownership rates among working age adults). Panel A shows demographic and SES information. The overall picture in Uganda and Malawi is one of serious poverty. Average years of schooling is 5.5 years in Uganda and 4.2 years in Malawi, both substantially lower than the minimum to complete elementary schooling (seven years in Uganda and eight in Malawi). Literacy rates are low: only 77% of people in Uganda and 61% in Malawi can read and write in the local language. The main sources of income there are entrepreneurship and agriculture.

[22] We note that all our results are robust to including only those households who answered all four rounds, with the sole exception that the increase in total monetary savings in Uganda is only significant when using the larger set of households.

Panel B shows access to savings. There are big differences across countries. The dominant form of saving in this unbanked population is in cash at home – in Uganda, 97% of people report keeping cash at home (to reduce reporting bias we asked about cash at home or in a secret place), while interestingly in Malawi only 49% do (suggesting that a large share of people may have close to no savings whatsoever). In Chile reported savings at home is even lower, at 25%. While this is a surprisingly low figure given Chile's level of development, perhaps this is indicative of the ease of finding alternative sources of cash for these households. We asked about many other sources, including ROSCAs, saving with other people, and mobile money. In Uganda 23% save in ROSCAs, whereas in Malawi the share is only 5%, both much smaller percentages than in Kenya (i.e. Dupas and Robinson 2013a). While we excluded households with formal accounts, we did not exclude those with mobile-money accounts, which encompass only 3% of our sample at baseline in Uganda , and 0% in Malawi, where mobile money had yet to be introduced. All in all, reported savings are very low: total reported savings stocks is only $32 in Uganda, $23 in Chile, and a really low $12 in Malawi. While we do not necessarily take these values at face value as people may under-report savings at home to an enumerator, we view them as indicative of extremely low financial savings.

Panel C presents some basic statistics on income and expenditures. By both measures, respondents in Uganda and Malawi are very poor, especially in Malawi: total expenditures in the month before the baseline were only $18 in Malawi and $32 in Uganda (income was $26 and $32). While we do not have a measure of total household expenditures (since we only interviewed one respondent), these households are quite likely to be below the global poverty line.[23] In Chile, the income and expenditure questions were asked of the household rather than the individual: reported values were $250 in expenditures and $270 in income, much larger than in the two other countries.

3 Results

3.1 Take-up of the Accounts

Table 2 presents statistics on take-up of the accounts. As mentioned earlier, 54% of respondents opened accounts in Uganda, 69% in Malawi, and 17% in Chile. The majority of those opening accounts did not use them very much as shown in Figure 1, where we present the distribution of the number of deposits over the study period. In the 3 countries, 42%, 41%,

[23]We did ask respondents to report the source of income of the spouse, but in many cases they did not know this value with certainty, if we include those reports income is $41 in Uganda and $34 in Malawi.

and 6% used the accounts at least once. We define users as "active" if they made at least 5 deposits in the first 2 years after getting the account offer. According to this definition, active usage rates were 17% in Uganda, 10% in Malawi, and 3% in Chile.[24]

Among active users, usage is quite high: active users made 13 deposits over the study period in Uganda, 12 in Malawi, and 14 in Chile, and the average amount of total deposits among active users was $528 in Uganda, $648 in Malawi, and $1,858 in Chile. These figures imply average monthly deposits of about $22, $24, and $110 per month for active users, and $4, $3, and $4 for the overall treatment group (total deposits were calculated over 22 months in Malawi, 24 in Uganda and 17 in Chile due to data availability). These amounts are not trivial for Malawi and Uganda (where average monthly individual expenditures are about $15 and $30 per month, respectively), but they are tiny in Chile, where average monthly household expenditures are about $250 per month. The pattern of usage we observe here is similar to several previous studies in rural Kenya (Dupas and Robinson 2013a, Dupas, Keats and Robinson 2015), which both find that a majority of households never use the accounts, but usage among active users is high.

Figure 2 plots the cumulative density function of the total amount deposited into the account over the study period. On each graph, we also plot a line for the balance for which the interest on deposits would cover the fees (so that the accounts would yield a positive financial return). Given the interest rates, these would be very large balances: $702 in Malawi and $348 in Uganda. Very few people save this much (just 13% in Uganda and 3% in Malawi). This suggests that, absent the fee waiver offered for the study, these accounts are unaffordable for the majority of unbanked households–and it is worth noting that the fees charged by financial institutions chosen for this study are comparable to those charged by most institutions throughout the African continent (Demirgüç-Kunt et al. 2015).

Figure 3 plots usage over time. Interestingly, while average usage is fairly modest, people who do use the accounts continue to use them throughout the study period. As can also be seen, people deposit and withdraw at similar rates over time. Consequently, account balances do not increase very much over time, suggesting that the account balance is a poor measure of usage in this context.

[24]This definition differs from Dupas and Robinson (2013a), which only had 6 months of bank usage data and thus defined active usage as making at least 2 deposits over the first 6 months. Prina (2015) uses their definition in her comparison of take-up across studies even if studies have a longer window (Table 3 in her paper). With their definition, the figures in our study are 32% in Uganda, 25% in Malawi and 5% in Chile.

3.2 Determinants of Take-up

We next examine the correlates of take-up and active usage of the bank accounts in the treatment group. We look at two primary outcomes: the "active usage" dummy defined above, and total deposits (for which we use an inverse sine hyperbolic transformation to approximate a log specification without dropping the zeroes, as is common in this literature (see Prina 2015 and Callen et al. 2014). Since the Chilean bank did not give us access to personal identifiers in the administrative account data, the only outcome we can examine there is accepting our offer of assistance to open the account.

Results are presented in Table 3. There are three important predictors of usage that are statistically significant in both Uganda and Malawi: distance to the bank branch, years of education and a proxy for wealth (the log value of agricultural and household assets). The negative correlation between distance and usage is likely due to travel costs and is suggestive that access to the branch is a constraint.[25] The positive correlation between usage and years of education and asset holdings is suggestive that better-off households have more income to allocate to savings, though could also operate through other channels, such as human capital. This correlation has also been found in previous work, such as Dupas and Robinson (2013a) and Dupas, Keats, and Robinson (2015). We find some evidence that baseline savings are correlated with usage, in particular savings at a ROSCA in Uganda, and home savings in Malawi. In contrast to Dupas and Robinson (2013a), we find no differences in take-up between genders or across occupations.

Overall, we can't predict very well who the active users are based on observables. The R-squared in the regressions in Table 3 never goes beyond 0.11. Among other things, that means that we cannot use a propensity score matching algorithm to identify who in the control group would have been likely active users, in order to compare active users with their proper counterfactual and increase statistical power compared to a standard "intention-to-treat" (ITT) estimation.

3.3 Comparing administrative to survey data

Our main results for treatment effects on total savings use the survey data from the follow-ups, since these are the only measures we have for the control group. How accurate is this data? Web Appendix Table WA4 shows figures on deposits in the month before the date of each follow-up survey, from the survey and from the administrative data. Averaging across rounds, average deposits in the survey data were $2.13 in Uganda and $0.55 in Malawi,

[25] Alternatively, this correlation could certainly be due to other differences between households that live close to towns and households that live further away. Note however that the correlation is conditional on most obvious covariates.

substantially lower than the average of $2.94 and $1.77 from the administrative data. The table shows that the survey data has fewer large transactions: the standard deviation of deposits is at most half as large compared to the administrative records in both countries, and there is a wide discrepancy in the highest percentiles of the deposit distribution. The balance data is closer to the truth, and even possibly overstated (average reported balances were $21 in Uganda and $9 in Malawi, compared to true values of $12.5 and $8 recorded by the banks). To deal with this misreporting, in the main specifications we winsorize at 1%, which brings the two measures much closer together (but for completeness we also show non-winsorized results in appendix). While this type of measurement error is unlikely to be unique to our case and has been an issue in any study of this type, its presence suggests that effects on savings balances will tend to be understated.

Another note of interest concerning the administrative data shown in Table WA4 is that the 30 days before the surveys (the periods over which deposits were self-reported) had lower bank usage than the average month in the period: while administrative data suggests average monthly deposits over the entire study period was $4 in Uganda and $3 in Malawi, for the months covered by the surveys the same administrative records show averages of only $3 in Uganda and $1.8 in Malawi. This means that the snapshot obtained from surveys may further dampen observed impacts on total savings.

3.4 Impact on savings and other downstream outcomes

In Uganda and Malawi, we examine the effects of the accounts on a number of outcomes from the follow-up data (in Chile, as discussed above, we did not collect follow-up data because the take-up of the account was so low). We use the experimental variation to examine differences in outcomes between the treatment and control groups. Since the experiment was randomized and we have baseline measures of most outcomes, regressions are very simple. For a given outcome Y_{hst} for household h in strata s in wave t (see Section 2.3 for details on the strata), we run the following ANCOVA regression

$$Y_{hst} = \alpha T_{hs} + \beta Y_{hs1} + \mu_s + \theta_t + \varepsilon_{hb} \tag{1}$$

where we control for the baseline value of the outcome (Y_{hs1}), stratification dummies (μ_s) and wave dummies (θ_t). All monetary values are winsorized at the 99th percentile to reduce the prevalence of outliers. Whether winsorizing is the correct thing to do when usage is so skewed is unclear however – we therefore show non-winsorized results in Table WA5 and WA6. The coefficient α represents the Intent-to-Treat effect.

3.4.1 Savings

Results for savings are reported in Tables 4 (deposits over the 30 days prior to the survey) and 5 (savings balances). Table 4 shows a treatment effect on monthly deposits in financial institutions (commercial banks, microfinance banks, and Savings and Credit Cooperatives, including the partner bank) of just \$0.74 in Uganda and \$0.13 in Malawi. These are fairly small figures, amounting to about 2% of individual labor income in Uganda and 0.5% in Malawi. Table 4 also shows substantial crowd out – in fact, the effect on overall deposits is not significant. We take this as at best suggestive since there is a lot of error in measuring these flows, and we prefer to rely on the saving stock data to quantify crowd out.[26]

Table 5 (savings balances) is our preferred specification to explore crowd out since, as mentioned earlier, the limited window over which savings flows was measured missed most of the activity. Column 1 shows that the stocks of savings went up by \$8.8 in Uganda and \$3.9 in Malawi. Both effects are statistically significant, but are again quite small.[27] We find evidence of crowd out: in Uganda, savings in other sources declined, most notably home savings which declined by \$2.7; in Malawi, home savings declined by \$2. Thus, the overall increase in monetary savings amounted to \$5 in Uganda (statistically significant in Table 5, but this is not robust to not winsorizing the top 1% as can be seen in Table WA6) and \$1.4 in Malawi (not significant). As percentages, these are about 10% of control group savings (which are \$41 in Uganda and only \$14 in Malawi), and about 1% of annual expenditures (which are \$350 in Uganda and \$180 in Malawi, calculated from Table 6). When we pool the two countries together the treatment effect on total savings is significant at the 5% level, but again the magnitude of the effect is very low. We also note that in Uganda the baseline level of total monetary savings was about USD 5 smaller in the treatment group, thus the effect estimated in the ANCOVA regression could be due to reversion to the mean (if we do not control for the baseline value, the treatment effect is positive but not significant (not shown)).

Overall, our reading of these results is that the average treatment effect on total savings was *at best* very modest, and not clearly differentiable from zero.[28]

[26]Columns 1 and 2 in Web Appendix Table WA7 replicate Table 4 by using the administrative data on deposits at SACCOs (Uganda) or Banks (Malawi) instead of the reported data for people with at least one deposit. Results are very similar to those presented in Table 4, though the effect in formal deposits increases (but it is still quite low in absolute terms), and the total deposits becomes statistically significant.

[27]Another reason balances are modest can be seen in Figure 3, which shows that withdrawals and deposits were roughly of the same order of magnitude among users – users were taking out what they were putting in.

[28]Columns 3 and 4 in Web Appendix Table WA7 replicate Table 5 by using administrative data on balances at the moment of the survey instead of reported savings at SACCOs (Uganda) and Banks (Malawi) for those with positive balance data. The effect size in Uganda is here again smaller and the effect on total savings becomes not statistically significant.

3.4.2 Other downstream outcomes

For completeness, Table 6 reports results of the bank account offer on a host of important downstream outcomes, including business investment, expenditures, transfers to and from others, health, and education. We find no statistically significant effects on any outcome. Table 7 shows effects on a set of attitudes and beliefs. Here again we find no effect on any outcome, with the one exception of trust in banks. Ultimately, we conclude that if the accounts did benefit the subset of active users, there are evidently too few of them to meaningfully affect these average treatment effects.[29]

4 Understanding Low Take-up

4.1 Uganda and Malawi: Poverty, Inflation and Transaction Costs

The take-up analysis in Table 2 shows a correlation between usage and baseline wealth, and between usage and distance from the branch, suggesting that baseline poverty as well as transaction costs might be important impediments to usage. To further explore this, at endline we asked respondents why they did not use the accounts more. These results are reported in Table 8. In Panel A, we asked treatment group non-users what barriers prevented them from saving. The dominant answer was simply that people were too poor to save: 80% of respondents in Uganda and 89% in Malawi gave this answer.

In Uganda we further asked people why they find it hard to save in any source (not necessarily the bank) – shown in Panel C, 90% of respondents mention having low income as one of their top 2 reasons. Other main factors mentioned as main reasons are related to expenditures: 73% state that expenses are too high and 82% answered that unexpected emergencies make it difficult to save. These all refer to the same basic problem that income is not enough to generate savings once subsistence expenditures have been taken care of. These poverty-related, self-reported barriers to bank usage are broadly consistent with the poverty levels observed in our surveys. Self-reported expenditures in Malawi are just $15 per month

[29]In Malawi and Uganda, we had stratified the randomization of the bank account offer by gender and occupation in order to test for heterogeneity in the effects across subgroups. We do not report this analysis in the paper for brevity, but we have run this regression as pre-specified and found no systematic evidence that some subgroup saw impacts from the treatment. In particular, we do not see effects among vendors, in contrast with Dupas and Robinson (2013a). A major difference between the vendors in this sample and those in Dupas and Robinson (2013a) appears to be in their average income – vendors in Dupas and Robinson (2013) report earning more money and may thus have had a higher ability to save. Another important difference between the two settings is that inflation was larger in Uganda and especially in Malawi over the study period than it was in Kenya at the time of the Dupas and Robinson (2013) study five years earlier. In the next section, we discuss in more detail these potential explanations, and others, for the lack of take-up and impacts.

and total savings stocks are just $12 total. In Uganda, these figures are $30 per month and $30 savings total. These are much lower than in other studies such as Dupas and Robinson (2013), Prina (2015) and Callen et al. (2014). We provide additional summary statistics on the economic lives of individuals in the Uganda and Malawi sample in Table WA8. The overall picture that emerges is one of subsistence living, with over 85% of farm produce being self-consumed, very low levels of cash income, and very low levels of remittances being received from outside the village.

Poverty is not the only reason people did not use the accounts, however – in particular, while we have shown that people hold very little financial savings, they do have *some* savings. In both countries, we tried to shed light on this by asking people who saved in a source other than the bank why they chose not to use the bank (i.e. these are people that have some savings but chose not to hold it at the bank), the results of which can be found in Panel B. This encompasses nearly all respondents – 96% of respondents in Uganda and 94% in Malawi say that, at least sometimes, they save money in some other source. Around 33% in Uganda claim that it is because they do not have enough money to save in a bank account. Relatedly, in Malawi 33% report that depositing on the account is not worth it since they would need to withdraw it shortly to finance consumption, and 37% report not being able to accumulate enough of a sum to warrant a trip to the bank. Other factors that were commonly reported are liquidity: the money at the bank is not available when needed (30 % in Uganda) and distance to the bank (17% on average in the two countries).[30] These results suggest that, in addition to poverty, the illiquidity of the bank account was a deterrent (which is corroborated by the take-up analysis, which showed that distance negatively predicted usage).

A final issue is that both Uganda and Malawi experienced high rates of inflation during the study period. Figure WA1 shows how the peak inflation periods coincided with our study phases. In Uganda, inflation spiked shortly after the bank account offer. In Malawi, the particularly spectacular inflation, driven by the 34% devaluation of the Malawian currency by the central bank in May 2012, started almost a year after the intervention. There is no clear break in bank usage around the time of the devaluation among the few study participants that used the accounts however – in particular, no increase in withdrawals just before the devaluation (see Figure 3).

[30] These results do not appear specific to our study sites. In 2011, a multi-country nationally representative survey conducted by the World Bank (FINDEX) found that "lack of money" was the primary reason given for not owing an account, at 83% in Uganda and 88% in Malawi, followed by the costs of the accounts (52% in Uganda and 24% in Malawi), distance (41% in Uganda and 12% in Malawi), lack of required documentation (38% in Uganda and 18% in Malawi) and lack of trust (24% in Uganda and 9% in Malawi).

4.2 Chile: Widespread insurance and credit access

Understanding the reasons for the modest take-up became the primary question of interest for the Chile site. A qualitative survey was administered to 639 individuals from our treatment group in May 2012 in order to gauge their relative importance. We find evidence for several important factors.

First, recall that bank account ownership is much higher in Chile than the other two sites, with 74% of respondents we interviewed in our door-to-door census exercise reporting already having accounts (despite the fact that we focused our study in the poorest region of Chile and in communities with the lowest bank account penetration according to our partner bank BancoEstado). In addition, bank accounts were readily available at no financial cost. This is a very different context from the Uganda and Malawi sites, and strongly suggests that people without accounts in Chile chose not to open them because they did not want them. As shown in Table 1, unbanked respondents in Chile were predominantly older women who were out of the labor market and relied on others for financial support (26% report that their main source of income is the wage of other household members, and another 35% report that it is their pension or other government assistance).

Second, Chile is a much more developed economy than Malawi and Uganda and offers various support programs for poor people. Panel A of Table 9 presents evidence on government support. 73% of households receive government assistance (50% of them receive a family subsidy that includes free medical care and dental treatment), 32% receive some type of pension, and 85% receive either government assistance, a pension, or both. Among those who do not receive a pension, 76% expect to receive one in the future. Government assistance and pensions are distributed monthly, constituting a reliable income stream for a majority of the sample. Our follow-up data shows that the vast majority (96%) of government transfer recipients receive them without a bank account, and only 23% of current transfer recipients see a benefit to having the transfer deposited directly into a bank account. In all, the system of government transfers is highly utilized and perceived to be highly effective, likely attenuating the demand for savings accounts.

Healthcare also seems to be comprehensive for the sample as shown in Panel B of Table 9. 86% of the sample believes that the cost for a major medical procedure like surgery would be mostly or completely covered by government programs. The share the household would expect to pay for a surgery is low: it is 0 for 62% of the sample and 25% for another 19%. Healthcare that is expected to be comprehensive further mitigates the need to privately store funds to respond to health shocks.

Third, the Chile population enjoys easy access to low-cost credit, reducing the need to privately save for a specific purpose or an emergency. Using baseline data, Panel C of Table 9

shows that 30% of respondents reported having obtained a loan or credit card from a formal institution, and 11% had an active credit line or credit card. In addition, in our follow-up survey, 48% report having bought an item on installment payments in the previous year. Moreover, when respondents are asked how they would get money to cover an emergency that requires around $600, only 1% reported that they would use savings, while 17% reported they would get a loan from a bank or formal institution, 5% would get a loan from other sources, and 23% from family or friends. While many of these respondents also mention that the interest rates on these loans are high, nevertheless these figures suggests that credit from multiple formal and informal sources is both accessible and widely used.

5 Comparison with other savings studies

Table 10 provides a detailed meta-comparison of 16 recent studies including randomized trials of savings products. The most similar (i.e., closest to a "basic" savings account) papers are Dupas and Robinson (2013a) with Kenyan vendors and bicycle taxis, Prina (2015) with women living in slums in Nepal, and Dupas, Keats and Robinson (2015) with unbanked households in rural Kenya. Each of these prior studies observed some effect on at least one downstream outcome for at least a subsample, such as business investment/expenditures for female vendors (Dupas and Robinson 2013a), perception of financial well-being among poor women (Prina 2015), or dependence on remittances and financial support to others for dual-headed households (Dupas, Keats and Robinson 2015). As discussed earlier, we checked for the presence of impacts on such sub-samples in our data but did not find any significant patterns. What explains this difference?

As it turns out, the take-up pattern we observe is not that far from these other studies. The two closest papers conducted in East Africa are Dupas and Robinson (2013a) in which only 35% of people ever used the account, and Dupas, Keats and Robinson (2015) in which only 28% did. As here, the people who used the accounts saved fairly large sums, however, and so the positive treatment effects were driven by a minority of users who benefited greatly. The pattern in the closely related study of Prina (2015) in Nepal is somewhat different : 80% of people took up accounts in that study and most users made many deposits.

We postulate that the main reason that usage was lower in our study sites is that people in Chile did not have much use for accounts, and that people in Uganda and Malawi did not use the accounts much because they were poorer than in previous studies. In addition, we find strong evidence that people who lived further from the bank used the accounts less, suggesting that travel costs were an impediment. The discrepancy in the emergence of downstream outcomes among users may come from the fact that the impacts were more

diverse and thus harder to observe in Uganda and Malawi.

However, there are also other features of the interventions that might explain the differences. Prina (2015) worked with an NGO which operated local banking locations in the slums where people lived, for 3 hours per day twice per week. These mobile branches reduced transaction costs substantially; in addition, the pre-arranged schedule of visits may have served as a reminder or coordination device for people. The respondents in Dupas and Robinson (2013a) were all entrepreneurs working in a market where the bank was located, so transaction costs were most likely smaller. In addition, the collection of logbooks from participants could have produced a behavioral attention-increasing "nudge" that, when *interacted* with the treatment of a bank account, led to higher savings for a subset of the treatment group. Another possible difference is that the accounts in Dupas and Robinson (2013a) and Dupas, Keats and Robinson (2015) had withdrawal fees, which might have acted as a (weak) commitment device (note, however, that Chile had withdrawal fees as well, so this explanation is not relevant to explain lower usage there). A final possibility is that several of these studies were operated by NGOs (Prina 2015) or marketed by NGOs at the outset (Dupas and Robinson 2013a and Dupas, Keats and Robinson 2015). The NGO may have implicitly signaled that it was in people's best interest to save more (compared to a bank which is trying to maximize its own profits) or may have induced people to expect benefits from the NGO from complying (i.e., individuals may perceive that satisfying the guidance of an NGO could lead to future benefits). This is unlikely to be the main explanation though: while accounts were not endorsed in Uganda or Chile, they were endorsed by the NGO in Malawi and yet take-up was still low.

Extending past the "basic" savings accounts, Panel C in Table 10 shows usage and treatment effects for more "behavioral" savings accounts and features, including commitments (commitments to deposit, commitments to no withdraw), reminders, labeling of accounts, peer effects or financial literacy training. For most studies the sample was narrowly selected (the sample is often composed of previously banked households; Dupas and Robinson 2013b focused on those self-selected into participating in a ROSCA) and therefore comparisons with our representative sample of unbanked households are difficult. Overall, the pattern that emerges, if any, is that different features matter for different segments of the population, with no "one size fits all".

6 Conclusion

Bank accounts as currently offered appear unappealing to the majority of individuals in our three samples of unbanked, rural households – even when these accounts are completely

subsidized. While we do observe substantial usage among a subset of active users, we are unable to pick up any statistically significant effects on downstream outcomes. This is not surprising since the average impact on total savings is itself relatively modest at best, and noisily estimated. If any, treatment effects on downstream outcomes are likely diffuse since savings purposes are heterogeneous, thus difficult to detect, because of little ability to predict how user households would use the savings.

One important question is whether the approximately 80% of individuals in our Malawi and Uganda samples who did not make much use of their account are simply too poor to save at all, or whether the bank accounts were simply not well tailored to their needs or habits. We provide suggestive evidence that poverty is the main limiting factor. In both sites, but especially in Malawi, households hold limited savings in any source. We find that assets are predictors of usage in both sites. However, we find some suggestive evidence that barriers such as transaction costs limit usage too: distance to the bank is a predictor of usage in both sites. Overall, our results suggest that while there may be an unmet demand for formal savings instruments in rural Africa, bare-bones bank accounts are not appealing. Therefore, pushing for existing formal institutions to expand their services to rural areas, even with one-time account opening subsidies, may not be enough to broaden financial access and definitely will not yield the hoped for poverty alleviation results.

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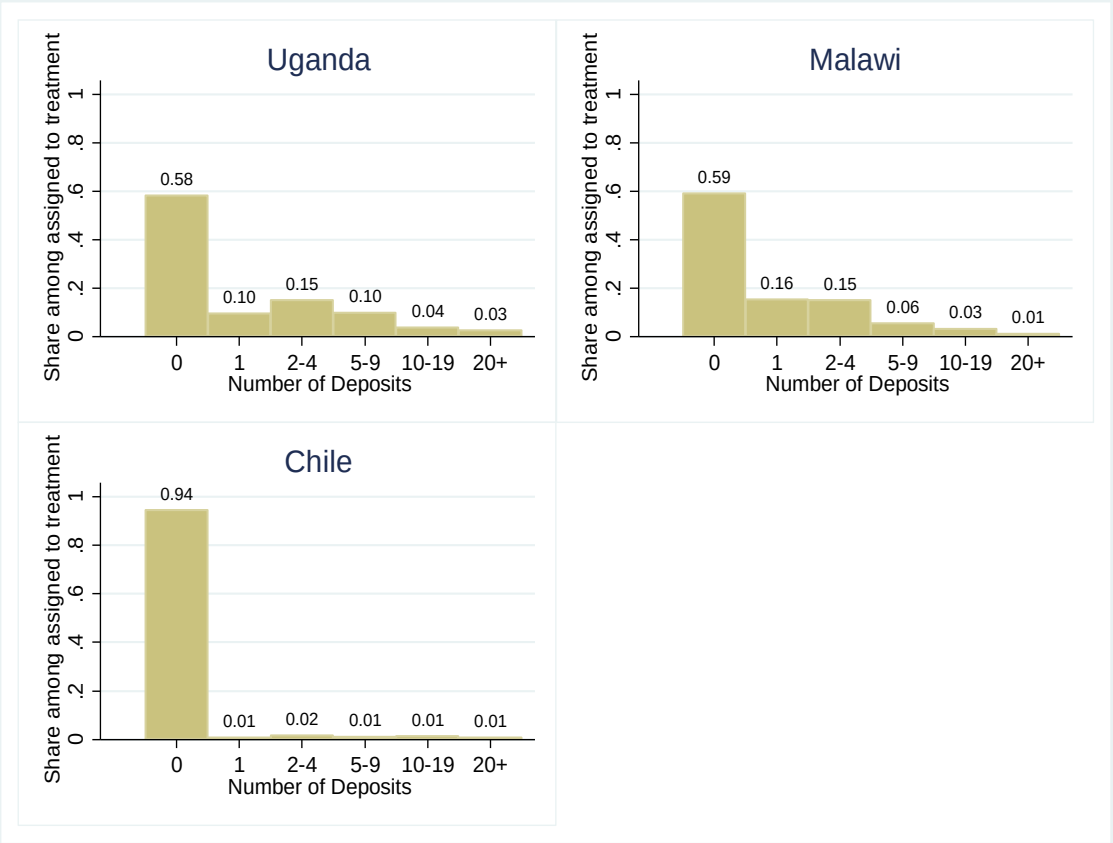
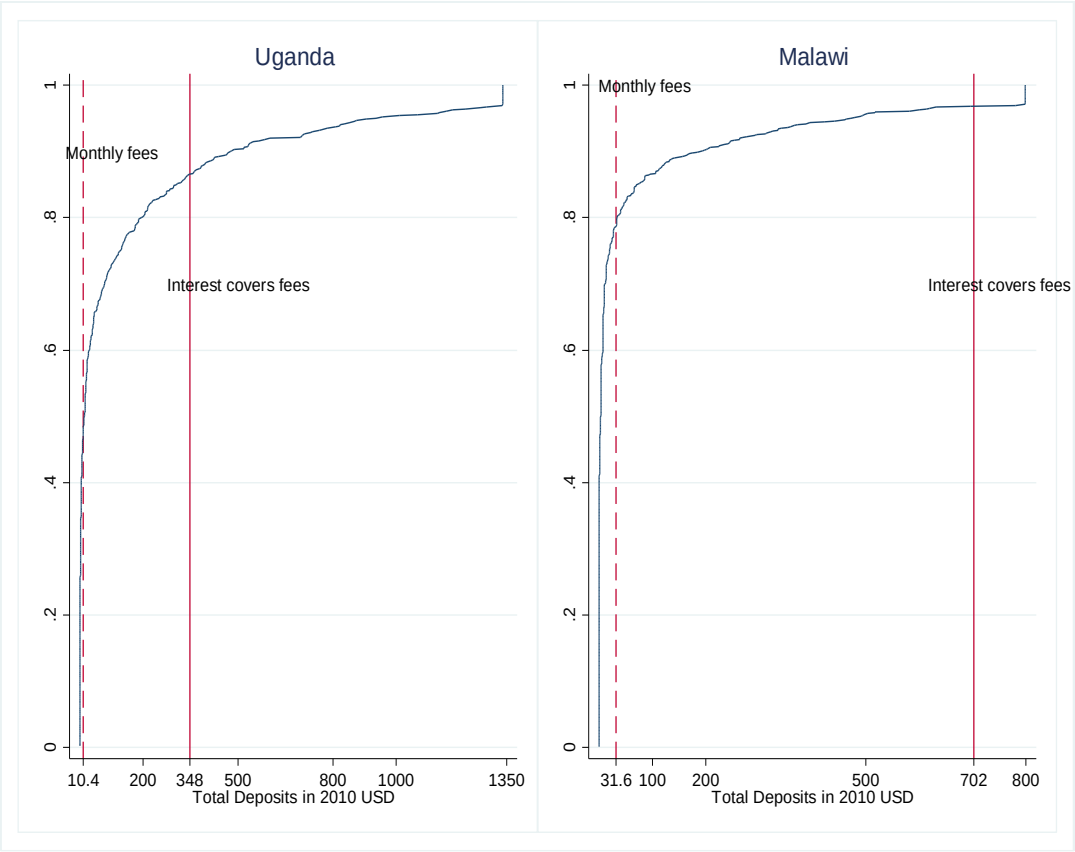
Figure 1. Distribution of Number of Deposits



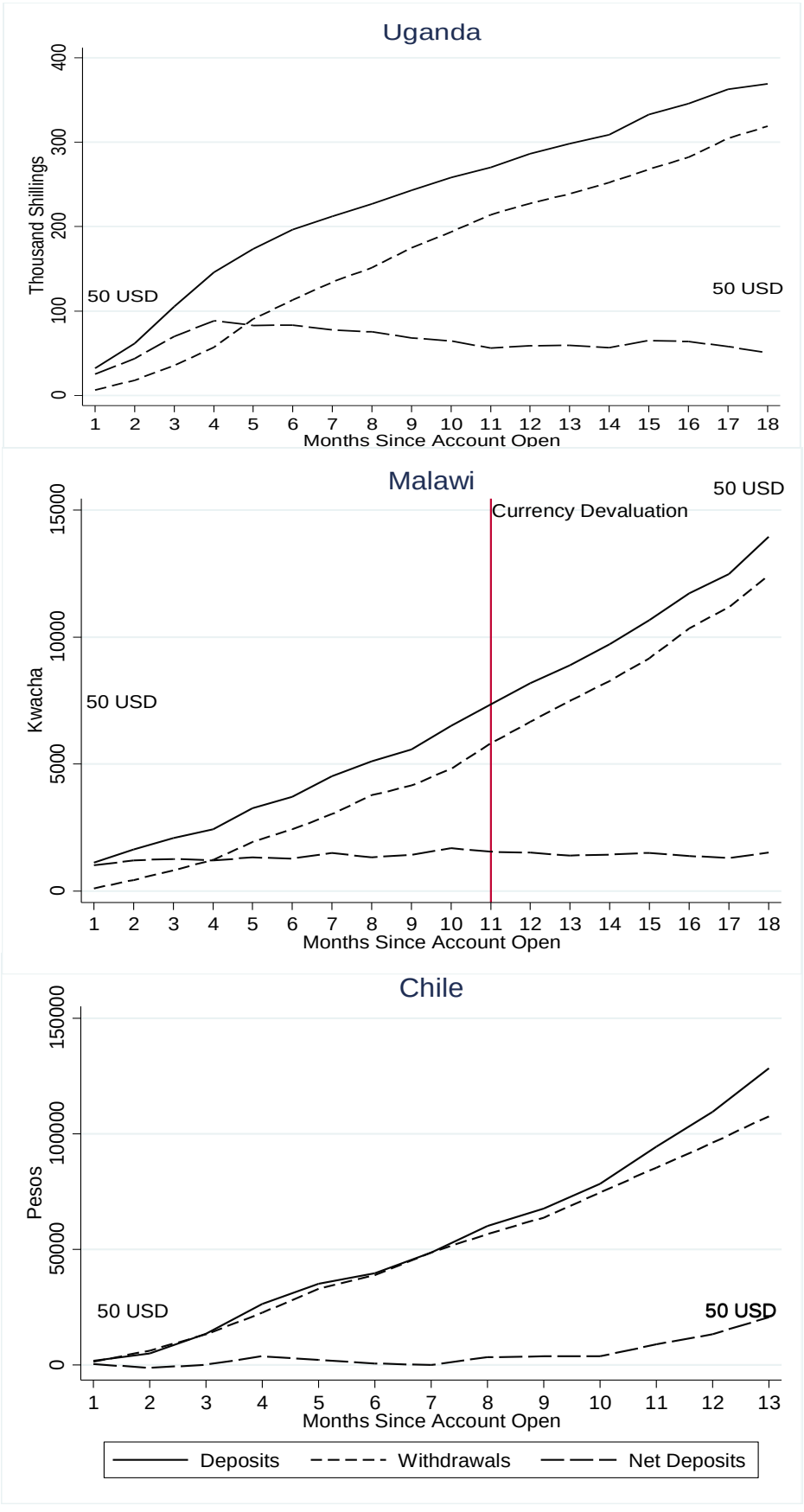
Notes: This plots the distribution of number of deposits onto sponsored bank accounts among individuals who were offered an account. Number of deposits is calculated over 24 months in Uganda, 22 months in Malawi and 17 months in Chile.

Figure 2. Deposits and Fees



Notes: This plots the CDF of total deposits onto sponsored bank accounts among individuals in the treatment group who opened an account, in the first two years after accounts were offered. The dashed vertical line shows the total value of monthly fees that would have been owed onto the account over the two year period had the account not been sponsored. The solid vertical line shows the threshold total deposit amount needed for the interest rate paid on the accounts to equalize the fees. Thus only those with a total deposit amount above that threshold would face a non-negative interest rate, absent a fee waiver.

Figure 3. Evolution of Usage Over Time, from Administrative Data



Notes: Plots show evolution of total deposited and total withdrawn to date over time, as well as their difference. The y-axis are in local currencies as the exchange rate changed over the study period in Malawi hence making comparisons over time in USD somewhat difficult. The "50 USD" text boxes at placed to show the exchange rate at the beginning and end of the study period.

Table 1. Baseline Summary Statistics

	(1)	(2)	(3)	(4)	(5)	(6)
	Uganda		Malawi		Chile	
	Control Mean (S.D.)	Treatment difference (Std. Err.)	Control Mean (S.D.)	Treatment Difference (Std. Err.)	Control Mean (S.D.)	Treatment Difference (Std. Err.)
Panel A. Demographics and SES						
Female	0.72	0.00	0.68	0.00	0.78	-0.02
	(0.45)	(0.02)	(0.47)	(0.02)	(0.41)	(0.02)
Main Occupation						
Entrepreneur	0.46	0.01	0.37	0.00	0.10	-0.01
	(0.50)	(0.02)	(0.48)	(0.02)	(0.30)	(0.01)
Farmer	0.32	-0.01	0.23	0.00	0.03	0.00
	(0.47)	(0.02)	(0.42)	(0.02)	(0.18)	(0.01)
Employee	0.17	0.00	0.29	0.00	0.17	0.00
	(0.38)	(0.02)	(0.45)	(0.02)	(0.37)	(0.02)
Housewife/Unemployed	0.05	0.00	0.11	0.00	0.70	0.01
	(0.21)	(0.01)	(0.31)	(0.01)	(0.46)	(0.02)
Age	36.23	0.11	39.79	-0.33	51.54	-0.05
	(11.90)	(0.52)	(17.00)	(0.73)	(16.74)	(0.75)
Married	0.71	0.00	0.72	0.00	0.46	0.01
	(0.45)	(0.02)	(0.45)	(0.02)	(0.50)	(0.02)
Household size	5.15	-0.04	4.60	-0.07	3.80	0.01
	(2.39)	(0.10)	(1.99)	(0.09)	(1.95)	(0.08)
Years of education	5.49	0.01	4.21	-0.15		
	(2.95)	(0.13)	(3.44)	(0.15)		
Acres of Land Owned by household	1.51	0.07	2.19	0.06		
	(2.17)	(0.11)	(1.88)	(0.08)		
Value of Household and Agricultural Assets	373.66	32.91	144.26	6.12		
	(694.09)	(65.66)	(270.67)	(16.45)		
Distance to bank branch in km	2.68	-0.09	6.03	-0.32		
	(2.03)	(0.09)	(3.22)	(0.14)		
Panel B. Savings						
Participates in ROSCA	0.23	0.00	0.05	-0.01		
	(0.42)	(0.02)	(0.22)	(0.01)		
Holds savings in cash at home	0.97	-0.02	0.49	0.00	0.25	-0.02
	(0.18)	(0.01)**	(0.50)	(0.02)	(0.44)	(0.02)
Holds savings with friends/family	0.11	0.00	0.07	0.01	0.02	-0.01
	(0.31)	(0.01)	(0.25)	(0.01)	(0.15)	(0.01)
Holds savings in mobile money account[1]	0.03	-0.01	0.00	0.00		
	(0.18)	(0.01)	0.00	0.00		
Holds other cash savings[2]	0.02	0.00	0.00	0.00		
	(0.15)	(0.01)	(0.07)	0.00		
Total Monetary Savings	31.80	-5.35	11.82	0.60	23.22	-4.52
	(111.87)	(4.33)	(45.00)	(2.08)	(148.94)	(5.40)
If you needed USD 25 urgently, how would you get the money? *(For Chile, asked about USD 60)*						
Would use (only) savings	0.05	-0.02	0.02	0.00	0.03	0.00
	(0.22)	(0.01)**	(0.13)	(0.01)	(0.16)	(0.01)
Would use savings and other method	0.27	0.02	0.04	0.00	0.03	0.00
	(0.44)	(0.02)	(0.20)	(0.01)	(0.16)	(0.01)
Would borrow/ask from friends/family	0.78	0.02	0.38	-0.01	0.61	0.00
	(0.82)	(0.04)	(0.62)	(0.03)	(0.49)	(0.02)
Would sell animals (Chile: sell something)	0.35	0.04	0.07	0.03	0.02	0.00
	(0.88)	(0.04)	(0.34)	(0.02)*	(0.15)	(0.01)
Would be impossible to get it	0.16	0.00	0.41	-0.02	0.19	-0.02
	(0.40)	(0.02)	(0.49)	(0.02)	(0.39)	(0.02)
Panel C. Income and Expenditures						
Total expenditures(last month)[3]	32.06	-0.59	17.80	-1.35	250.05	-13.16
	(51.08)	(2.43)	(45.74)	(1.60)	(216.78)	(9.17)
Labor income (last month)[3]	32.48	-5.88	25.72	2.79	270.56	13.50
	(95.45)	(4.38)	(67.27)	(3.77)	(426.39)	(17.64)
P-value (Joint F-test)		0.33		0.79		0.46
Observations		2159		2107		1967

Notes: Randomization in Uganda was stratified on occupation, gender and bank branch, while in Malawi it was based on occupation, gender, marital status, literacy, and whether the respondent was from the household or market sample. The table uses values of the variables collected in Round 1 Survey (Oct-Nov 2010 in Uganda, Feb-Mar 2011 in Malawi and Dec 2010-Mar 2011 in Chile). All monetary values are expressed in June-2010 US dollars. Columns 2, 4, 6 and 8: means for the treatment-control difference and robust standard errors in parentheses obtained from a regression of each variable on treatment.

1 The question was introduced later in the baseline survey and was only asked of 1,661 households in Uganda.

2 Other cash savings: savings with shopkeeper or employer, farmer groups and village leader.

3 The question asks about total expenditures and income of the respondent in Uganda and Malawi and of the household in Chile.

Table 2. Take-up of Sponsored Bank Account among Assigned to Treatment

	(1)	(2)	(3)	(4)	(5)	(6)
	Uganda		Malawi		Chile	
	All	Active Users Only	All	Active Users Only	All	Active Users Only
Opened account	0.54	1.00	0.69	1.00	0.17	1.00
Ever used account (at least 1 deposit)	0.42	1.00	0.41	1.00	0.06	1.00
Made at least 2 deposits within first 2 years	0.32	1.00	0.25	1.00	0.05	1.00
Active user (Made at least 5 desposits within first 2 years)	0.17	1.00	0.10	1.00	0.03	1.00
Total number of deposits	2.67	12.83	1.78	12.06	0.49	14.24
Total number of withdrawals	1.44	6.87	1.42	10.95	0.56	15.07
Total value of deposits	106.54	528.59	74.56	647.64	66.01	1858.11
Total value of withdrawals	90.01	446.47	70.47	623.80	58.17	1494.89
If ever deposited, median deposit size	13.10	29.37	11.44	29.23	5.68	82.64
If ever withdrew, median withdrawal size	19.97	54.56	10.29	33.57	8.67	104.86
Total Savings at baseline from Survey Data	26.45	29.26	12.42	34.28	18.70	N/A
Number of observations	1079	180	1053	106	938	29

Notes: Samples restricted to those offered a sponsored account. The sponsored account offer was made in March-April 2011 in Uganda and in June-July 2011 in Malawi. "Active user" is defined as making at least 5 deposits within 2 years. Monetary values are deflated to June 2010 values and converted to nominal USD. Total deposits are calculated over 24 months in Uganda, 22 months in Malawi and 17 months in Chile due to data availability.
In Chile, opened account is defined as within 5 months of the baseline due to bank data availability.

Table 3. Correlates of Take-up among those in Treatment Group: Regression Analysis

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Uganda			Malawi			Chile
	Active[1]	Deposits (inverse hyperbolic sine transformation)		Active[1]	Deposits (inverse hyperbolic sine transformation)		Accepted Assistance
Demographics							
Female	0.048	-0.200	-0.244	-0.004	0.305	0.343	-0.086
	(0.029)	(0.209)	(0.212)	(0.024)	(0.179)*	(0.178)*	(0.048)*
Not Married	0.099	0.464	0.538	0.006	-0.313	-0.307	-0.026
	(0.106)	(0.693)	(0.696)	(0.128)	(0.788)	(0.794)	(0.054)
Female x Not Married	-0.096	-0.470	-0.540	0.016	0.543	0.508	0.089
	(0.108)	(0.711)	(0.715)	(0.130)	(0.804)	(0.809)	(0.061)
Household Size	0.010	0.097	0.102	-0.001	0.054	0.054	-0.086
	(0.006)*	(0.038)**	(0.038)***	(0.006)	(0.042)	(0.042)	(0.051)*
Age (1/10s of years)	0.070	0.729	0.681	0.092	0.757	0.770	0.004
	(0.064)	(0.457)	(0.458)	(0.031)***	(0.230)***	(0.227)***	(0.005)
Age Squared	-0.003	-0.049	-0.043	-0.009	-0.066	-0.067	0.132
	(0.008)	(0.056)	(0.056)	(0.003)***	(0.024)***	(0.023)***	(0.055)**
Entrepreneur	0.058	0.577	0.493	0.029	0.348	0.288	-0.098
	(0.049)	(0.333)*	(0.336)	(0.033)	(0.241)	(0.241)	(0.066)
Farmer	-0.016	0.215	0.166	0.007	0.276	0.287	-0.024
	(0.050)	(0.339)	(0.340)	(0.030)	(0.237)	(0.237)	(0.040)
Employee	0.068	0.390	0.285	0.000	0.063	0.068	0.037
	(0.055)	(0.370)	(0.373)	(0.029)	(0.223)	(0.222)	(0.031)
Access to bank							
Distance to closest branch in km	-0.016	-0.127	-0.121	-0.005	-0.072	-0.066	
	(0.005)***	(0.038)***	(0.038)***	(0.004)	(0.027)***	(0.027)**	
Asset Holdings and Education							
Log Value of Household and Agricultural Assets	0.021	0.165	0.134	0.019	0.201	0.166	
	(0.013)*	(0.090)*	(0.091)	(0.009)**	(0.063)***	(0.062)***	
Years of education (dummy for more than primary in Chile)	0.008	0.068	0.064	0.010	0.115	0.114	0.018
	(0.004)**	(0.027)**	(0.027)**	(0.004)**	(0.027)***	(0.027)***	(0.008)**
Cognitive Ability/Financial Literacy							
Raven's score (standardized)	0.011	0.140	0.140	0.006	0.035	0.031	
	(0.012)	(0.083)*	(0.082)*	(0.010)	(0.076)	(0.076)	
Financial Literacy/Numeracy Index (standarized)[2]	-0.009	-0.028	-0.031	-0.009	0.110	0.112	
	(0.012)	(0.080)	(0.079)	(0.009)	(0.062)*	(0.062)*	
Baseline Savings Activity							
Stock saved in cash at home (2010 USD)			-0.001			0.005	-0.003
			(0.001)			(0.001)***	(0.012)
Stock saved at Rosca (2010 USD)			0.013			0.024	
			(0.006)**			(0.017)	
Stock saved with friends/family (2010 USD, 1/100 USD for Chile)			0.000			0.003	0.470
			(0.003)			(0.004)	(0.146)***
R-squared	0.054	0.085	0.094	0.047	0.099	0.110	0.048
Observations	1079	1079	1079	1049	1049	1049	917
Mean of Dependent Variable	0.167	1.588	1.588	0.100	1.476	1.476	0.192

Notes: OLS regressions, also include branch dummies for Uganda and Malawi. Some variables have missing data; to avoid dropping these observations, we set these values to zero, create dummies for having missing data and include these in the regressions (coefficients not reported). Standard errors in parentheses. *, **, and *** denote significance at 10%, 5%, and 1% respectively.

[1]Active is defined as making at least 5 deposits over the length of the study.

[2]Financial Literacy, was asked of a random half of the sample at baseline and for which we impute the mean of the financial literacy index. The index was composed of 5 questions about investments involving multiplication, averages and percentages.

Table 4. Impacts on Flows: Deposits Last 30 days in 2010 USD

	(1)	(2)	(3)	(4)	(5)
	Deposits at formal financial institutions[1]	Deposits in other sources			Total Deposits
		Mobile Money	Cash at home or in secret place	ROSCA/VSLA	
Panel A: Uganda					
Treatment	0.741	-0.089	-0.352	0.095	0.426
	(0.152)***	(0.047)*	(0.44)	(0.20)	(0.56)
Dep. Var. Mean in Control Group	0.42	0.24	5.51	2.29	8.46
Std. Dev.	3.75	1.91	16.67	6.35	19.45
Obs.	6,026	6,023	6,015	6,013	5,993
Number of Households	2085	2083	2081	2081	2077
Panel B: Malawi					
Treatment	0.132		-0.088	-0.039	0.005
	(0.040)***		(0.14)	(0.06)	(0.16)
Dep. Var. Mean in Control Group	0.12		1.36	0.55	2.03
Std. Dev.	1.19		5.47	1.99	6.06
Obs.	5,903		5,902	5,903	5,902
Number of Households	2,046		2,046	2,046	2,046
Panel C: Pooled Treatment	0.44		-0.237	0.028	0.193
	(0.080)***		(0.24)	(0.11)	(0.30)

Notes: Pooled regression including three waves of follow-up data 12, 18 and 24 months after baseline. Panel C pools data from Uganda and Malawi. We control for the baseline value of dependent variable (it is 0 in column 1 and not available in Malawi for column 4), stratification dummies and wave dummies. Standard errors are clustered at the respondent level. All dependent variables are top winsorized at the 99th percentile. For Malawi, data for savings in VSLA are only available for the second and third follow-up.

[1] Formal financial institutions include commercial banks, microfinance banks, and savings and credit cooperatives (SACCOs).

Table 5. Impacts on Savings Stocks in 2010 USD

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
								Loans[4]	
	Formal Financial Institutions[1]	Mobile money	Cash at home or in Secret place	ROSCA/ VSLA[2]	Friends/Family	Other cash savings[3]	Total Monetary Savings	Received Informal Loan	Received Formal Loan
Panel A: Uganda									
Treatment	8.780	-0.387	-2.743	-0.349	-0.813	0.003	4.98	0.001	0.007
	(1.270)***	(0.188)**	(1.544)*	(0.79)	(0.65)	(0.01)	(2.440)**	(0.01)	(0.01)
Dep. Var. Mean in Control Group	5.03	1.10	21.61	8.54	4.63	0.02	40.94	0.08	0.04
Std. Dev.	31.60	6.97	55.40	25.00	22.67	0.26	80.26	0.28	0.19
Obs.	6007	6027	6022	6028	6030	6017	5978	6033	6033
Number of Households	2085	2085	2085	2085	2085	2085	2085	2085	2085
Panel B: Malawi									
Treatment	3.883	-	-1.951	-0.438	-0.034	-	1.391	-0.006	0.005
	(0.605)***	-	(0.671)***	(0.236)*	(0.019)*	-	(0.98)	(0.01)	(0.00)
Dep. Var. Mean in Control Group	2.15	-	9.20	2.45	0.10	-	13.87	0.04	0.02
Std. Dev.	15.08	-	26.15	8.63	0.82	-	32.57	0.20	0.14
Obs.	5900	-	5905	5906	5907	-	5898	5889	5889
Number of Households	2046	-	2046	2046	2046	-	2046	2040	2040
Panel C: Pooled Treatment	6.359	-	-2.484	-0.400	-0.447	-	3.052	-0.002	0.006
	(0.709)***		(0.862)***	(0.41)	(0.33)		(1.334)**	(0.01)	(0.00)

Notes: Pooled regression including three waves of follow-up data 12, 18 and 24 months after baseline. We control for the baseline value of dependent variable (we replace missing values of dependent variables at baseline by 0 and include dummies for missing observations), dummies for stratification variables and wave dummies. Standard errors are clustered at the respondent level. All dependent variables are top winsorized at the 99th percentile.

[1]Formal financial institutions include commercial banks, microfinance banks, and savings and credit cooperatives (SACCOs).

[2]For Malawi, data for savings in VSLA are only available for the second and third follow-up.

[3]Other cash savings: savings with shopkeeper or employer, farmer groups and village leader.

[4]In Uganda, data for having "ever" received a loan; in Malawi: data on having received a loan in the last 6 months, and we control at baseline with a varible on having "ever" received a loan. Informal Loan: from Rosca or Community Group (Uganda), Rosca, Village Bank or Moneylender (Malawi). Formal Loan: Bank, SACCO or MFI.

Table 6. Impacts on Downstream Outcomes in 2010 USD

	(1) Total Labor Income (last 3 months)	(2) Main or Secondary Economic Activity is a Business	(3) Business Inventory (Monetary Value)	(4) Self Reported Total Expenditures (Last Month)	(5) Food Expenditures (last 7 days)	(6) Lumpy Expenditures: Durables, Education and Home Repair (last year)	(7) Health Expenditures (last month)	(8) Expenditures on Agricultural Inputs (last month)	(9) "Regret" Expenditures Index	(10) Net Transfers to Friends or Relatives	(11) Health Outcomes Index	(12) Education Outcomes Index	(13) Assets (house items and animals)
Panel A: Uganda													
Treatment	0.502	0.000	-5.153	0.273	0.302	4.331	0.414	0.002	-0.008	-0.249	0.003	0.001	6.112
	(3.68)	(0.01)	(5.11)	(1.20)	(0.21)	(4.75)	(0.37)	(0.10)	(0.02)	(1.39)	(0.02)	(0.02)	(12.89)
Baseline Mean in Control Group	75.76	0.68	57.01	29.97	4.91	120.80	9.52	1.58	-0.01	-8.62	0.00	0.06	335.00
Std. Dev.	145.20	0.47	104.80	35.64	5.82	179.90	22.16	4.55	0.80	25.46	0.68	0.91	415.60
Dep. Var. Mean in Control Group	82.32	0.73	90.84	33.26	5.74	89.49	6.53	0.78	0.00	-18.67	0.00	0.00	313.40
Std. Dev.	132.40	0.44	175.40	43.71	7.08	164.70	12.58	3.61	0.89	46.91	0.66	0.67	505.90
Obs.	6032	6033	6025	5994	6021	6031	6030	6027	6031	6033	6033	5519	6033
Number of Households	2085	2085	2082	2073	2084	2085	2085	2084	2084	2085	2085	2000	2085
Panel B: Malawi													
Treatment	2.207	-0.004	0.585	0.416	0.193	0.015	-0.023	-0.018	0.047	0.071	-0.009	0.017	-6.309
	(1.97)	(0.01)	(0.39)	(0.84)	(0.19)	(0.61)	(0.05)	(0.03)	(0.024)*	(0.64)	(0.02)	(0.02)	(3.331)*
Baseline Mean in Control Group	69.09	0.37	5.89	15.75	3.98	6.46	0.26	0.02	-0.01	-3.98	0.00	0.05	129.70
Std. Dev.	124.50	0.48	15.95	20.55	5.02	17.85	0.96	0.11	0.82	13.18	0.74	0.94	165.10
Dep. Var. Mean in Control Group	40.30	0.34	4.97	21.11	5.23	7.32	0.66	0.30	-0.03	-8.77	0.00	0.01	92.38
Std. Dev.	70.69	0.47	14.61	27.93	6.85	22.30	1.88	1.35	0.85	21.78	0.67	0.63	153.80
Obs.	5906	5907	5877	4676	5903	5902	5900	5902	5900	5907	5907	5419	5907
Number of Households	2046	2046	2036	2025	2046	2046	2045	2046	2045	2046	2046	1967	2046
Panel C: Pooled Treatment	1.139	-0.002	-2.417	0.365	0.242	2.057	0.197	-0.009	0.019	-0.112	-0.003	0.008	-0.197
	(2.12)	(0.01)	(2.60)	(0.77)	(0.139)*	(2.43)	(0.19)	(0.05)	(0.02)	(0.77)	(0.02)	(0.02)	(6.79)

Notes: Pooled regression including three waves of follow-up data 12, 18 and 24 months after baseline. We control for the baseline value of dependent variable, dummies for stratification variables and wave dummies. Standard errors are clustered at the respondent level. All dependent variables are top winsorized at the 99th percentile. Total Labor Income: includes income from formal work, casual work, business, selling animals or animal produce and selling crops; at baseline it was asked for "last month" and multiplied by 3. Business Inventory: winsorized at the 95th percentile to avoid the influence of large outliers. Food Expenditures: include staples, grains, vegetables, fruits, meat, milk, eggs and salt. Lumpy Expenditures: Education expenditures include fees, uniforms and supplies, asked for the last 6 months at second monitoring in Malawi and multiplied by 2; Home Repair asked for last 6 months at second monitoring and endline in Malawi, multiplied by 2; Durable Expenditures asked only at baseline and first round in Malawi, include house and electronic equipment, vehicles, jewelry and furniture. Health Expenditures include medicines, fees, and other costs, asked for the last week at baseline in Uganda, multiplied by 4.3. Agricultural expenditures: asked for last year at baseline in Malawi, divided by 12. Indexes: defined to be the equally weighted average of z-scores of the components, with the sign of each measure oriented so that more beneficial outcomes have higher scores. The z-scores are calculated by subtracting the control group mean and dividing by the control group standard deviation of the respective variable in the same period. If an individual has a valid response to at least one component measure of an index, then the index is computed using the non-missing components. Regret Expenditure Index: includes four variables measuring expenditures on goods for which respondent reports at baseline that "it was a bad idea to purchase", or "wants to spend less in the future given constant income" using expenditure data collected in different modules. Net Transfers difference between transfer to friends/family minus transfer from friends/family including the self-reported value of both loans and gifts given to/received from friends or family members (excluding partner). Health Index: dummy for no member of household sick last month, percentage of sick members treated (imputed 100% if no member sick) and dummy for no member missed school or work because of illness last month. Education Index: percentage of school-age children enrolled, average number of school days attended last month by school-aged children (imputed 0 if not enrolled), percentage of school-aged children enrolled in private schools, dummy for no school-aged child lacks a backpack, dummy for no school-aged child lacks full uniform. Assets: self-reported total value of cattle (only for Uganda), other animals and household assets.

Table 7. Impacts on Savings Attitudes and Beliefs, Female Decision-making and Locus of Control

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Thinks that saving for the future is more important than giving to friends/family	Thinks that saving is only for rich people	Thinks other people in household would get angry if saved alone	Has very high trust in banks	Has lost or knows someone who has lost money deposited in a bank	Decision Making Index (only for Women)	Internal Locus of Control Index
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Panel A: Uganda							
Treatment	0.000	-0.015	-0.001	0.104	-0.035	0.020	0.000
	(0.01)	(0.01)	(0.01)	(0.022)***	(0.015)**	(0.05)	(0.02)
Dep. Var. Mean in Control Group	0.90	0.10	0.06	0.40	0.16	0.00	0.00
Obs.	1990	1990	1990	1990	1990	662	1974
Panel B: Malawi							
Treatment	0.015	0.006	-0.001	0.007	0.006	0.019	-0.015
	(0.02)	(0.01)	(0.01)	(0.02)	(0.01)	(0.05)	(0.02)
Dep. Var. Mean in Control Group	0.62	0.02	0.04	0.84	0.05	0.00	0.00
Obs.	2046	2046	2046	2046	2046	750	1949
Panel C: Pooled Treatment	0.008	-0.004	-0.001	0.055	-0.014	0.021	-0.007
	(0.01)	(0.01)	(0.01)	(0.013)***	(0.01)	(0.03)	(0.01)

Notes: OLS regression using follow-up III data, 24 months after baseline. We control for the baseline value of dependent variable when available and dummies for stratification variables. Standard errors are clustered at the respondent level. **Indices**: defined to be the equally weighted average of z-scores of its components, with the sign of each measure oriented so that more beneficial outcomes have higher scores. The z-scores are calculated by subtracting the control group mean and dividing by the control group standard deviation. If an individual has a valid response to at least one component measure of an index, then the index is computed using the non-missing components. **Locus of Control Index**: based on 8 questions with two options each, one reflecting internal control (value 1) and the others external control (value 0), the index measures internal locus of control. **Decision Making Index**: based on seven questions asking who in the household makes the decision about food, large items, children's schooling, children's health, personal health, social visits and business or work activities. We created a dummy equal to 1 for each decision if respondent reports taking part in the decision alone or with someone else, and 0 if reports not taking part in the decision. At baseline the questions were asked only of a random subsample, we impute mean values to missing observations and include a dummy for missing data at baseline. **Believes Saving is only for Rich People**: in Malawi the question was whether they believe saving in a bank is only for rich people. **Has Very High Trust in Banks:** omitted category includes two options: little or no trust in banks.

Table 8. Self-Reported Reasons for Non-Use of an Account

	(1)	(2)	(3)
	Uganda	Malawi	Chile
Panel A. Why didn't you use accounts? (treatment group non-users only)			
No money to save	0.80	0.89	0.07
Lack of trust in banks / formal institutions	0.03	0.00	0.11
Distance	0.01	0.01	0.00
Fees too high	0.01	0.02	0.03
Cannot provide minimum balance	0.05	0.15	0.00
Bureaucracy	0.03	0.03	0.00
Low interest rate	0.01	0.01	0.00
Not enough information	0.06	0.06	0.09
Cannot access money when needed	0.01	0.00	0.00
Not useful			0.09
Did not remember reason why did not open account			0.50
Number of respondents	377	554	430
Panel B. Reasons why bank account is not preferred savings vehicle (all treatment group individuals)			
Not enough money to save in bank	0.33	0.17	
Cash on hand needed soon, not worth depositing it for short while		0.33	
At bank, money not available when needed	0.30	0.08	
Distance from bank	0.18	0.16	
Would need to save more before it's worth the trip		0.37	
Lack of trust in banks / formal institutions	0.06	0.02	
Interest Rates/Returns	0.06	0.05	
Too much bureaucracy/paperwork involved with bank	0.05		
Lack of information about the account	0.03		
Number of respondents	999	1025	

Panel C. Self-reported reasons why it is difficult to save (Uganda only, endline survey)

	First Reason		1st or 2nd Reason	
	Control	Treatment	Control	Treatment
N/A, it is always easy to save	0.08	0.07	0.08	0.07
Low Income	0.68	0.69	0.90	0.90
Expenses are too high	0.34	0.34	0.73	0.71
Unexpected emergencies always come up	0.36	0.41	0.82	0.83
Spend money easily before saving enough	0.13	0.15	0.60	0.63
Spouse would use the money for something else	0.01	0.00	0.08	0.09
Requests from neighbors/friends	0.00	0.01	0.05	0.07
Requests from relatives	0.01	0.01	0.09	0.11
Too many debts	0.02	0.01	0.19	0.18
No safe place to save	0.02	0.02	0.10	0.09
Number of respondents	991	999	991	999

Notes:

Panel A: The question asked was: "What are the reasons you are not using a bank account at this time?" It was asked only of those reporting not using an account. The Non-user category was self-reported during the survey. In Chile, the question at endline was about the reasons on rejecting assistance for opening a bank account and was asked only of those who remembered having received and rejected the offer.

Panel B: Other instruments - Uganda: home, ROSCA, animals, mobile money; Malawi: home, ROSCA, animals, VSLA. The question asked in Uganda and Malawi was, Option A: "Why did you put your money into [SOURCE] rather than into the bank/MFI/SACCO account?" Option B: "Why did you put your money into [SOURCE] rather than opening and using a bank/MFI/SACCO account?" No option was read aloud.

Panel C: for the First Reason, the question asked was: "What makes it sometimes difficult for you to save money?" No option was read aloud. For the second reason each option was read aloud.

Table 9. Factors Related to Low Take-up in Chile

	(1)	(2)
	Mean	Obs.
Panel A. Government Assistance		
Receives some type of government assistance	0.73	622
Receives a pension	0.32	624
Receives either government assistance, a pension or both	0.85	623
Expects to receive a pension if does not currently receive one	0.76	395
Receives government transfer without a bank account	0.96	485
Thinks would be beneficial to have transfer deposited into a bank account	0.23	471
Panel B. Cost of Health Care		
Believes governmental programs would cover cost of a major surgery	0.86	622
If needed major surgery, co-pay would be 0%	0.62	639
If needed major surgery, co-pay would be 25%	0.19	639
Panel C. Access to Credit		
Ever got a loan or credit card from formal institution	0.30	1967
Has an active credit line or credit card	0.11	1927
Has bought an intem on installment payments last year [1]	0.48	638
If you had an emergency that required [USD 600], how would you get the money?		
Savings	0.01	1958
Reduce Expenses	0.04	1958
Loan from Bank or Financial Institution	0.17	1958
Loan from other source	0.05	1958
Family or Friends	0.23	1958
Does Not Know	0.27	1958
Would not be able to get the money	0.19	1958

Notes:
Panel A and B present data from the follow-up survey conducted with a subsample of 639 respondents in May 2012. Panel C present data from the baseline survey conducted with 1,967 respondents between December 2010 and March 2011.
[1] Question asked in the follow-up survey.

Table 10. Comparison with Other Studies

			Detailed Features of Intervention													Data											
Study, Country (published studies are underlined)	**Sample**	**Treatment/Intervention**	**No Fees (open, min. balance, monthl**	**Low Distance to Bank (branch < 2km**	**Interest Rate Subsidies**	**NGO Involved in Account Marketing**	**Framing/Labeling**	**Deposits Automat. w Transfers**	**Withdrawal Fees**	**Withdrawals Restricted**	**Peer Group Feature**	**Deposit Collector**	**Text Message Reminders**	**Financial Literacy Training**	**High Frequency Data Collection (including on financials)**	**Account Take-up**	**Account Usage**	**Usage Measure*: monthly average deposits over sample assigned to treatment (2015 USD dollars)**	**Usage Measure: Period used for monthly average (See notes at bottom)**	**Individual Income (monthly equivalent) (2015 USD dollars)**	**Household Income (monthly equivalent) (2015 USD dollars)**	**Stat. sig treatment effect on (admin) bank savings?**	**Stat. sig. treatment effect on total (reported) savings?**	**Impact on Other Savings Instruments?**	**Statistically significant treatment effect on other outcomes?**	**Nominal Interest Rate**	**Inflation rate over study period**
Panel A. This Paper																											
Uganda	2159 unbanked individuals	Cover Fees /Inform/Help Opening	X													54%	32% (> 1 deposit), 17% (> 4)	8.20	6 months	32	45	Yes	Yes	(-) sig.: on mobile money and cash at home, (-) not sig. friends/family and Roscas	No	3%	10.7%
Malawi	2107 unbanked individuals	Cover Fees /Inform/Help Opening	X			X										69%	25% (> 1 deposit), 10% (> 4)	3.07	6 months	29	37	Yes	No	(-) sig. cash at home, friends/family and Roscas	No	1.50%	14%
Chile	1967 unbanked individuals	Inform/Help Opening	X	X		X			X							17%	5% (> 1 deposits), 3% (> 4)	2.54	6 months	N/A	347	N/A	N/A	N/A	N/A	0%	3.7%
Panel B. Other Basic Savings Account Studies																											
Chin et al. (2015), U.S.	215 male unbanked Mexican immigrants	Assistance to get I.D. card required to open bank account (and paid for application fee)	X	X												43%	N/A	N/A		838	N/A	N/A	Yes	(-) not sig.: any savings in Mexico	Increase in income and decrease of share remittances to income by those who lacked control over how remittances were spent	N/A	
Dupas and Robinson (2013a), Kenya	170 female vendors, and 80 male bicycle taxi drivers, all unbanked	Cover Opening Fees /Inform/Help Opening	X	X		X			X						X	87%	35% (> 1 deposit), 17% (> 4)	8.22	6 months	66	N/A	Yes	N/A	(+) sig.: animal savings, (+) not sig.: rosca contributions	Yes (business investments, food and private expenditures, mainly for female vendors)	0%	10-14%
Dupas, Keats and Robinson (2015), Kenya	885 households	Cover Fees /Inform/ Help Opening, account offered to female or male head or both (randomized)	X			X			X							69%	28% (> 1 deposit), 15% (> 4)	3.33	6 months	18	26	Yes (dual-headed household only)	Yes (dual-headed household only)	(+) not sig.: Rosca contrib., money at home (+) sig. transfers to others,	Yes (increase in transfers out, decreases in transfers in)	0%	10-14%
Prina (2015), Nepal	1118 women living in slums	Cover Fees /Inform/Help Opening	X	X		X										84%	80% (> 1 deposit)	6.81	6 months	N/A	112	N/A	Yes	(+) not sig.: non-monetary assets (durables, livestock, gold), monetary assets (rosca, cash at home, friend/family), not reported separately	Yes (increase in index of reported financial situation, educational expenditures, fish and meat expenditures, higher ability to cope with shocks)	6%	10.5%

* **Notes for Usage Measure**. Dupas and Robinson (2013a): calculated from publicly available dataset. Dupas, Keats and Robinson (2015): provided by authors. Prina (2015): calculated from publicly available dataset. Ashraf et al. (2006b), Calculated from Table 1 Panel C. Brune et al. (2015): Calculated based on treatment effects (treatment coefficient + control group mean) in Table 4, it includes direct deposits. Callen et al. (2014): Calculated from Table 2 and email from authors, top 1% truncated. Dupas and Robinson (2013b): For the safebox we report total balance after 6 months divided by 6, this is a lower bound for average monthly deposits, we impute 0 for non-users from Table 2. Karlan and Linden (2014): Calculated based on Table 3, with parental outreach. Karlan and Zinman (2014): Monthly balance in the account including those making 0 deposits, calculated based on data reported in page 9. Karlan et al. (2016): amount saved at goal date from Table 3. Kast and Pomeranz (2014): calculated based on Table 2, email from authors. Schaner (2016): First panel includes deposits in individual accounts, second panel deposits in any account, short term results, email from author. Somville and Vandewalle (2014): Does not include rewards directly deposited, provided by email from authors.

(continued next page)

Table 10 (continued). Comparison with Other Studies

Study, Country (published studies are underlined)	Sample	Treatment	Detailed Features of Intervention: No Fees (open, min. balance, monthly)	Low Distance to Bank (branch < 2km)	Interest Rate Subsidies	NGO Involved in Account Marketing	Framing/Labeling	Deposits Automat. w Transfers	Withdrawal Fees	Withdrawals Restricted	Peer Group Feature	Deposit Collector	Text Message Reminders	Financial Literacy Training	Data: High Frequency Data Collection (including on financials)	Account Take-up	Account Usage	Usage Measure*: monthly average deposits over sample assigned to treatment (2015 USD dollars)	Usage Measure: Period used for monthly average (See notes at bottom)	Individual Income (monthly equivalent) (2015 USD dollars)	Household Income (monthly equivalent) (2015 USD dollars)	Stat. sig treatment effect on (admin) bank savings?	Stat. sig. treatment effect on total (reported) savings?	Impact on Other Savings Instruments?	Statistically significant treatment effect on other outcomes?	Nominal Interest Rate	Inflation rate over study period
Panel C. Other Studies																											
Ashraf et al. (2006a), Philippines	1777 current and former bank clients	Commitment Account with lockbox, offered automated transfers					X			X						28% (0% for autom. transf.)	14% (> 1 deposit)	N/A		N/A	381	Yes	Yes	N/A	N/A	4%	3.4%
Ashraf et al. (2006b), Philippines	346 current and former bank clients	Deposit collectors					X			X		X				28% accepted service	15% (> 1 deposit)	0.66	10 months	N/A	279	Yes	N/A	N/A	N/A	4%	3.4%
Brune et al. (2015), Malawi	3150 cash crop farmers in farmer clubs.	Basic Savings Account, direct deposit of crop proceeds, raffles (prizes privately or publicly paid), financial education				X								X		85% accepted account opening assistance	18% (> 0 direct deposits)	18.8	8 months	22 (tobacco farmers in the region)	N/A	Yes	N/A	N/A	No	2.5%	7.7%
		As above + Commitment savings account				X				X				X		Accepted assistance: 82% (basic acct.), 90% (commitment act.)	21% (> 0 direct deposits)	19.2 (basic acct) + 1.4 (commitment acct)				Yes			Increases in land cultivation, agricultural inputs and outputs, and household expenditures		
Callen et al. (2014), Sri Lanka	795 weekly income earners, no deposit last month	Account Opening, Deposit Collectors	X			X						X			X	89%	89% (> 0 deposits)	11.19	24 months	208	N/A	Yes	Yes	N/A	Increases in income and expenditures, increase working hours on the wage market	N/A	
Cole et al (2011), Indonesia	564 unbanked	Financial incentives to open account and financial training			X									X		4% low incentive, 9% med. incentive, 13% highest incentive	8% of high incentives group used account last 12 months	N/A		N/A	121	N/A	N/A	N/A	Increase in the probability of having any savings for highest incentive group	If balance > $1.06, variable	13%
Dupas and Robinson (2013b), Kenya	771 members of 113 ROSCAs	Safe Box	X	X			X									71%	N/A	1.15	6 months	38	N/A	N/A	N/A	N/A	Increase in preventative health investments and reached health goal	0%	
		Lockbox	X	X			X			X						66%		0.51	6 months						No	0%	
		Health Pot	X	X			X			X	X					72%		N/A							Increase in preventative health investments, reached health goal	0%	
		Health savings Account	X	X			X									97%		0.36	6 months						No	N/A	
Karlan et al. (2016), Peru, Bolivia, Philippines	Peru: 2,775 bank clients	Reminders for people with recently opened commitment accounts	X				X			X			X			N/A	69% (met committed min. deposit per month)	105	At goal date, balance	N/A	N/A	No	N/A	N/A	No	1 to 3%	2.6%
	Bolivia: 9,376 bank clients		X				X			X			X			N/A	56% (met committed min. deposit per month)	89	At goal date, balance	N/A	N/A	No	N/A	N/A	Increased likelihood to reach commitment goal		
	Philippines: 1,409 bank clients		X				X			X			X			23%	21% (met commited amount saved)	26	At goal date, balance	169	N/A	No	N/A	N/A	No		
Karlan and Linden (2016), Uganda	Students in 136 elementary schools	School-based commitment device for education savings with parental outreach. Strong commitment: withdrawals restricted via voucher for educational expenses only.	X	X		X	X			X	X					N/A	39% (saved with program)	0.03 (per student), 8.22 (per school)	24 months	5.33 (total income from work winsorized)	N/A	Increased savings in the program accounts	No	N/A	Higher expenditures on educational supplies	0%	10%
		As above, but weaker commitment: withdrawals in cash with strong encouragement to spend on educational expenses	X	X		X	X			X	X					N/A	42% (saved with program)	0.02 (per student), 4.15 (per school)		No		No	No		No		
Karlan and Zinman (2014), Philippines	9992 unbanked	Commitment account, lockbox, randomly allocated interest rate, individual vs. joint account					X			X						23%	9% (> 1 deposit)	0.71	12 months	80	N/A	N/A	N/A	N/A		2 to 3%	2.5%
Kast and Pomeranz (2014), Chile	3560 informal business owners, borrowers from credit institution, 90% females	Ordinary Account plus self-help group for half of treatment group, plus higher interest rate for a quarter of treatment	X		X						X					53%	16% (> 1 deposit), 8% (> 4)	2.7	12 months	116 (per capita household income)	N/A	Yes	No	N/A	Reduced short term borrowing, particularly to relatives and friends, improved subjective welfare, less likely to cut consumption if shock	0.3% (75% of accts.) or 5% real rate	7%
Schaner (2016), Kenya	749 unbanked couples	Individual ordinary savings accounts for husband and/or wife	X						X							31%	6% (> 1 deposit)	0.56 (individual accounts)	6 months	64	N/A	Long run impact on average daily bank balances only for individual account with subsidies	Reallocation of total assets to the subsidized spouse (20% interest rate)	Invidual/spouse: (-) sig: SACCOs, (+) sig. home savings, not sig.: Rosca, mobile	Increase in income and assets after 30 months for participants receiving higher individual interest rates. Individual interest rates increase entrepreneurship rates, joint rates increase public goods investment	0%	3.4% (during 6 months of account usage)
		Individual or joint ordinary savings accounts + Interest rate subsidies	X		X				X							48% (individual r)-78% (joint r), with 20% subsidy	15% (individual r), 34% (joint r) (>1 deposit), with 20% subsidy	7.46 (individual r) 8.28 (joint r), with 20% subsidy								4, 12 or 20%	
Somville and Vandewalle (2015), India	442 individuals (46% unbanked)	Weekly interviews with tasks paid either in cash or into accounts. Opened accounts for all participants		X		X		X								100%	46% (> 0 deposits)	1.13	3 months	N/A	N/A	Yes	Yes	(+) not sig.: post office. (-) not sig.: cash home	Reduction in frequently consumed items	4%	5%

Usage Measure: See notes in previous page

Web Appendix A: Sampling Details

Uganda

In Uganda, we first performed a census of all households living within a 12-km radius of one of the three MAMIDECOT branches in the sampled districts of Bukomansimbi and Kalungu. The census identified 9,287 households. Since the focus of our study was on unbanked households, we removed the 26% of the sample (2,415 households) who had bank accounts, and the additional 2% of the unbanked who had loans from banks or MFIs (152 households), leaving 6,720 unbanked households. We further excluded 775 households with no head in farming, services or vendor (these are households where both heads are civil servants, work in transportation, fishing or are unemployed), 86 households with a civil servant head, 828 households who were deemed to live too far away from the partner bank to benefit from an account (since they had not visited the market center of the nearest MAMIDECOT branch in more than a month), 701 households with no female head, 26 households with two female heads (polygamous households), 91 households with female heads older than 60 and 18 households not willing to participate in a new survey. These exclusion criteria reduced the sample to 4,195 households. Of this sample of 4,195 households, we then selected 3,000 for inclusion in the study, oversampling those receiving non-agricultural income since this was a less common occupation than agriculture, but which was the primary focus of previous studies such as Dupas and Robinson (2013a).[31]

A few months after the census, a detailed baseline survey was administered. The project targeted a specific individual within the household, not the household as a whole. The following rule was used to select respondents: if there are two heads, and they are both non-farmers or both farmers, pick randomly among the two heads; if there are two heads, and one is farmer and the other is not, pick the non-farmer.[32]

Out of the 3,000 households sampled, 2,442 answered the survey.[33] For treatment assignment we excluded an additional 282 households who reported in the baseline survey having

[31]The probability of being included in the sample was: (1) 100% for households in which at least one spouse was primarily employed in self-employment outside of agriculture (vending or services); and (2) 54% for households employed only in agriculture.

[32]We were not always able to enroll the selected household head in the study, especially if the male head of household was selected. In such cases, the respondent was replaced with his or her spouse. In total, 30% of men sampled for the study could not be surveyed at baseline and so were replaced by their wife (for that survey as well as the rest of the study), while only 3% of female respondents were replaced by their husbands. For this reason, our sample is predominantly composed of women (even among dual-headed households). We therefore do not emphasize gender differences in outcomes.

[33]We were not able to locate 241 households listed in the census and the rest who did not respond mainly moved outside the area of the study.

an account at a formal institution, leaving us a sample of 2,160 eligible households.[34]

Out of the final 2,160 eligible households, 50% were randomly allocated to receive the vouchers. Randomization was stratified by gender, occupation[35] and bank branch (recall there were 3 branches in the study). For treatment households, account opening occurred 4-5 months after the baseline. Individuals in the treatment group were visited by a MAMIDECOT agent.[36]

The agents gave some basic information about MAMIDECOT and the accounts, and also explained that the accounts normally featured various fees that would be waived for the study period. At the conclusion of the visit, the agents gave respondents a voucher which could be brought to MAMIDECOT and redeemed for a free account (these vouchers expired after 4 months). Beneficiaries of the free account were informed that the monthly maintenance fees would be waived for a total of 21 months, after which the promotion would end and account holders would have to cover it on their own, in practice the promotion ended in March, 2013, 24 months after vouchers were distributed.

Malawi

In Malawi, we conducted a census of all households from 65 villages within a 30-km radius of one of the two selected NBS branches (Balaka and Liwonde). This census identified 7,266 households. As in Uganda, we sought to enroll a sufficient sample of self-employed individuals. To this end, we performed an additional census of small business owners at 6 markets within the catchment area of the bank branches, which identified an additional 2,031 respondents. The total identified sample was thus 9,297 households; we have data for 9,268 of them. We first dropped 1,415 households (15%) with an account at a formal financial institution.

Similar to Uganda, we consecutively excluded 41 households with no head in farming, services or vendor (these are households where both heads are civil servants or are unemployed), 79 households with a civil servant head, 133 households that were inadvertently included in the sample but report not being within 30km of the location of the branch for most of the year, 513 households with no female head and 477 polygamous households. These exclusion criteria reduced the sample to 6,610 households. Unlike Uganda, we did not screen on having an older female head or on being employed in fishing/transport. We also dropped 78 households for which we do not know if they were interviewed at home or at the market.

[34]Some of them just opened the accounts between the census and the baseline survey, while others had not reported the accounts in the census.

[35]Households occupations in our final sample were: employee, self-employed: vendor, business owner, trader; or farmer: including animal rearing, housewife or unemployed.

[36]See footnote 17 in the text.

This final sample included 5,531 households from the household census and 1,001 households from the market census.

We then randomly sampled 2,185 (65%) of the 5,531 eligible households from the household census and 371 (50%) of the 742 households from the market census that also satisfied the condition that the respondent was in either in vending or other business owner (e.g. we dropped an additional number of 259 respondents in other occupations). This resulted in our final sample of 2,556 households. To select the individual to be interviewed, the selection process was identical to the one used in Uganda: if there are two heads, and they are both non-farmers or both farmers, pick randomly among the two heads; if there are two heads, and one is farmer and the other is not, pick the non-farmer.[37]

A detailed baseline survey similar to the one used in Uganda was conducted a few months after the census. Out of the 2,556 individuals sampled, 2,208 answered the survey.[38] For treatment assignment we excluded an additional 101 individuals who reported in the baseline survey having an account at a formal institution.[39] Out of the final 2,107 eligible individuals, 50% (1,053) were randomly selected to receive the vouchers.

Randomization stratification was similar, but slightly different from Uganda: randomization was stratified by: occupation,[40] gender, marital status, literacy, and whether the respondent was from the household or market sample.

As in Uganda, account opening occurred 4-5 months after the baseline. Individuals in the treatment group were visited by a NBS agent.[41] The agents gave some basic information about NBS and the accounts, and also explained that the accounts normally featured various fees that would be waived for the study period. At the conclusion of the visit, the agents gave respondents a voucher which could be brought to NBS and redeemed for a free account (these vouchers expired after 4 months). Beneficiaries of the free account were informed that the monthly maintenance fees would be waived for a total of 18 months, after which the promotion would end and account holders would have to cover it on their own. In practice voucher distribution happened in June/July 2011, and the promotion ended in June 2013,

[37] We sampled 1,454 female and 1,102 male respondents. However, as in Uganda, we were not always able to enroll the selected household head in the study and it was more common for men to be absent than women. 27% of men sampled for the study could not be surveyed at baseline and were replaced by their wife for that survey and the rest of the study. 2.5% of female respondents were replaced by their husbands. Here again, this means that the men in our sample are a somewhat selected set.

[38] We were not able to locate 130 individuals listed in the census, 81 denied consent to conduct the survey, and the rest who did not respond mainly moved outside the area of the study.

[39] Some of them just opened the accounts between the census and the baseline survey, while others had not reported the accounts in the census.

[40] Occupations were: employee, vendor, business owner, trader/farmer or animal rearing, cash crop farmer, and housewife or unemployed

[41] See footnote 19 in the text.

24 months later.

Chile

While the experimental design was very similar in Malawi and Uganda, it was quite different in Chile. In Chile we partnered with BancoEstado, the only public commercial bank and the third largest bank in Chile. BancoEstado offers an account, called "CuentaRUT", that every Chilean with a national Chilean ID/tax number (the "RUT") is eligible to open free of charge. Despite the fact that CuentaRUT accounts are free, their take-up is low among those who live in small towns or villages lacking a bank branch. To increase inclusion, BancoEstado recently developed a network of point of sales in local stores (POS, or Cajas Vecina), through which BancoEstado account holders can make deposits, withdrawals and bill payments. CuentaRUT accounts can be opened online, but still require one visit to a branch for activating the ATM card, signing a contract and registering a signature. Besides deposits and withdrawals from a BancoEstado account, several other transactions can be made through a CajaVecina, such as utility payment or cell phone minutes purchases. While deposits (up to 5 per month), purchases and payments are free of cost, withdrawals are charged $0.62 per transaction if made at the CajaVecina or ATM, and $1.24 if made at a branch of the bank (these fees were not covered by the study). The same cost applies to deposits after the 5th deposit in a given month. Moreover, the maximum balance allowed in the account is around $6,300, and monthly deposits have a limit of around $4,000. The account is equivalent to a transaction account and does not pay interest rate.

Chile differed methodologically from the other sites in that the census exercise was not representative of the entire region, enumerators went door-to-door until they reached a sample size of nearly 2,000 eligible households, whereas in Uganda and Malawi the whole targeted areas were censused and a sample was taken for the baseline. A door-to-door census exercise was conducted in 48 Comunas of Region IX in Southern Chile. During that census exercise 9,985 respondents were interviewed, out of which 74% already had bank accounts (either the respondent or spouse). Of the 2,472 respondents without a bank account, 1,975 were willing to enroll and complete a baseline survey, the others refused to provide their RUT and so were not considered for the study. Among those who were eligible and enrolled in the study, half were selected to receive procedural assistance to open one of BancoEstado's free bank accounts, the CuentaRut. Treatment was assigned based on the last digit of the RUT: odd numbers were assigned to treatment, and even numbers to the control group. Treatment was not stratified on any characteristics.

Households were informed of the existence of the CuentaRUT account, invited to open

an account with BancoEstado, and if interested received assistance with the account opening process. In particular, we provided an internet-connected computer for the online application and reminded people of the necessary steps to take for account activation.

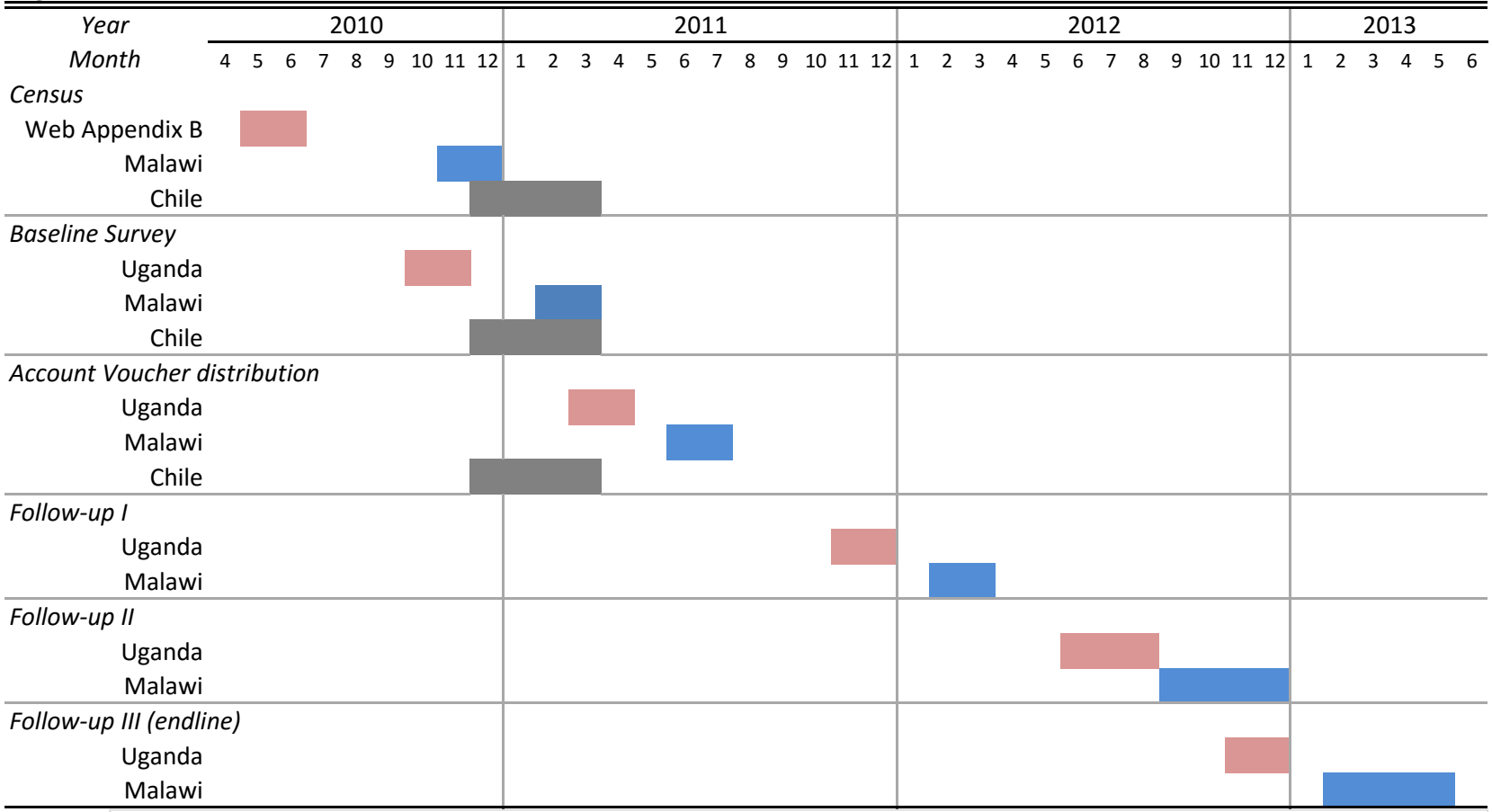
In total, 938 households were offered an account. Of this group, only 17% signed up and activated their account within a few months.

Web Appendix B

Banking the Unbanked? Evidence from three countries

Pascaline Dupas, Dean Karlan, Jonathan Robinson and Diego Ubfal

Figure WA1. Timeline



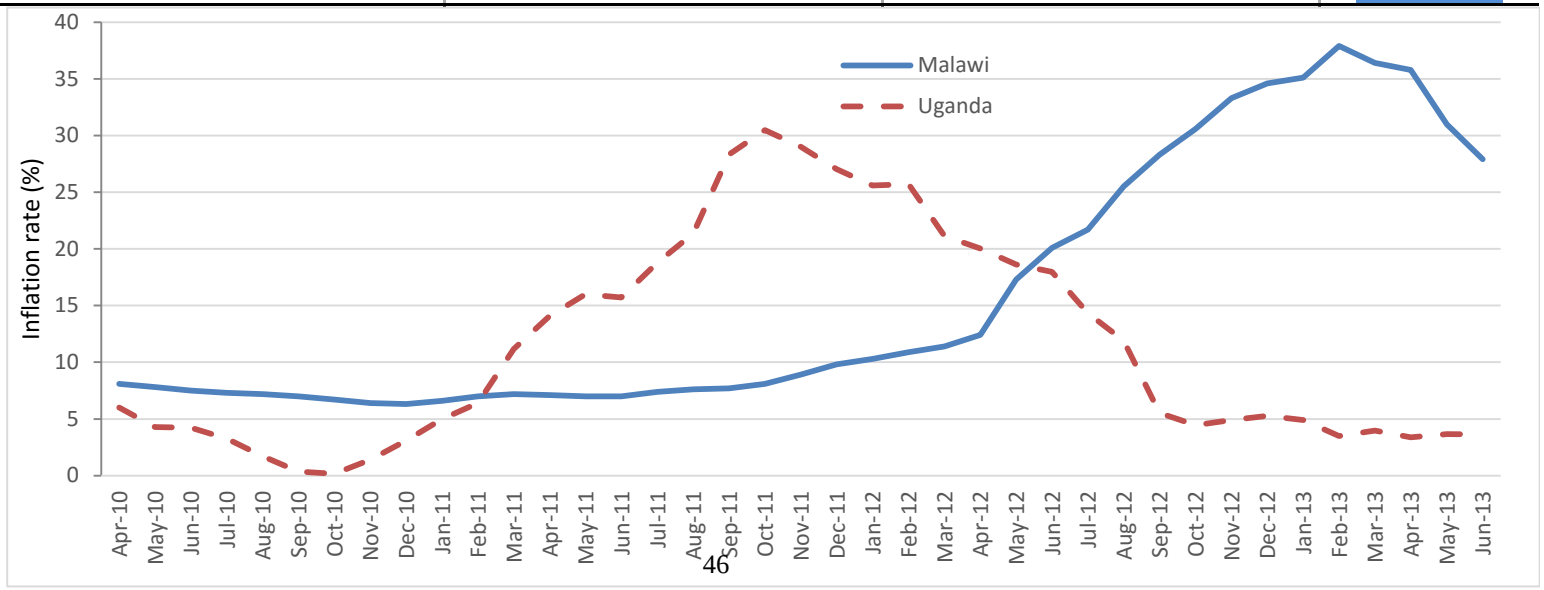


Table WA1. Analysis of Attrition in follow-up surveys

	Uganda		Malawi	
Dependent Variable	Binary=1 if respondent was not interviewed in any of the three follow-up surveys			
	(1)	(2)	(3)	(4)
Web Appendix B	0.00	0.02	-0.01	0.02
	(0.01)	(0.10)	(0.01)	(0.06)
Interactions Between Treatment and Covariate:				
Female		0.03		0.00
		(0.02)		(0.02)
Not Married		-0.01		0.01
		(0.02)		(0.03)
Female x Not Married		-0.03		-0.02
		(0.03)		(0.03)
Household Size		0.00		0.00
		(0.00)		(0.00)
Age (1/10s of years)		-0.01		-0.05
		(0.04)		(0.025)**
Age Squared		0.00		0.01
		(0.01)		(0.003)**
Entrepreneur		-0.03		-0.01
		(0.04)		(0.03)
Farmer		-0.01		0.00
		(0.04)		(0.03)
Employee		-0.01		0.04
		(0.05)		(0.03)
Distance to closest branch in km		0.00		0.00
		(0.00)		(0.00)
Log Value of Household and Agricultural Assets		0.00		0.01
		(0.01)		(0.01)
Years of education		0.00		0.00
		(0.00)		(0.00)
Adjusted R-squared	0.00	0.00	0.00	0.01
Observations	2159	2159	2107	2106
F-test p-value for joint significance of interaction terms		0.71		0.33
Mean of Dependent Variable	0.03	0.03	0.03	0.03

Notes: OLS regressions with robust standard errors in parentheses. All explanatory variables are measured at baseline. Regressions include the level of all covariates used in the interactions with treatment. Binary control variables were included for missing observations of a covariate, and then missing covariates were replace by zero. We also included two branch dummies for Uganda and one for Malawi. Significance levels: *10 percent, **5 percent, *** 1 percent.

Table WA2. Summary Statistics, Restricted to respondents who answered at least one follow-up

	(1)	(2)	(3)	(4)
	Uganda		Malawi	
	Control Mean (S.D.)	Treatment difference (Std. Err.)	Control Mean (S.D.)	Treatment Difference (Std. Err.)
Panel A. Demographics and SES				
Female	0.72	0.00	0.68	0.00
	(0.45)	(0.02)	(0.47)	(0.02)
Main Occupation				
Entrepreneur	0.45	0.01	0.37	0.00
	(0.50)	(0.02)	(0.48)	(0.02)
Farmer	0.33	-0.01	0.23	0.00
	(0.47)	(0.02)	(0.42)	(0.02)
Employee	0.17	0.00	0.29	-0.01
	(0.38)	(0.02)	(0.45)	(0.02)
Housewife/Unemployed	0.05	0.00	0.11	0.00
	(0.22)	(0.01)	(0.31)	(0.01)
Age	36.27	0.17	39.86	-0.36
	(11.90)	(0.53)	(17.09)	(0.74)
Married	0.71	0.00	0.72	0.00
	(0.45)	(0.02)	(0.45)	(0.02)
Household size	5.15	-0.03	4.62	-0.07
	(2.38)	(0.10)	(2.00)	(0.09)
Years of education	5.49	0.00	4.20	-0.16
	(2.95)	(0.13)	(3.45)	(0.15)
Acres of Land Owned by household	1.53	0.05	2.19	0.07
	(2.19)	(0.11)	(1.88)	(0.09)
Value of Household and Agricultural Assets	372.78	35.80	145.00	3.92
	(697.99)	(67.96)	(274.00)	(16.87)
Distance to bank branch in km	2.71	-0.10	6.00	-0.29
	(2.03)	(0.09)	(3.20)	(0.14)
Panel B. Savings				
Participates in ROSCA	0.23	0.00	0.05	-0.01
	(0.42)	(0.02)	(0.22)	(0.01)
Holds savings in cash at home	0.97	-0.02	0.49	0.00
	(0.18)	(0.01)**	(0.50)	(0.02)
Holds savings with friends/family	0.11	0.00	0.07	0.01
	(0.31)	(0.01)	(0.25)	(0.01)
Holds savings in mobile money account[1]	0.03	-0.01	0.00	0.00
	(0.18)	(0.01)	0.00	0.00
Holds other cash savings[2]	0.02	0.00	0.00	0.00
	(0.15)	(0.01)	(0.07)	0.00
Total Monetary Savings	30.26	-3.16	11.98	0.49
	(105.12)	(4.28)	(45.60)	(2.13)
If you needed USD 22 / 26 urgently, how would you get the money?				
Would use (only) savings	0.05	-0.02	0.02	0.00
	(0.21)	(0.01)**	(0.13)	(0.01)
Would use savings and other method	0.27	0.02	0.04	0.00
	(0.44)	(0.02)	(0.20)	(0.01)
Would borrow/ask from friends/family	0.78	0.02	0.38	-0.01
	(0.81)	(0.04)	(0.63)	(0.03)
Would sell animals	0.36	0.03	0.07	0.03
	(0.90)	(0.04)	(0.33)	(0.02)*
Would be impossible to get it	0.16	0.00	0.41	-0.03
	(0.40)	(0.02)	(0.49)	(0.02)
Panel C. Income and Expenditures				
Total Expenditures (last month)	31.63	-1.47	17.58	-1.18
	(51.05)	(2.00)	(46.11)	(1.64)
Labor Income (last month)	32.99	-6.02	25.69	2.72
	(96.84)	(4.53)	(67.85)	(3.84)
P-value (Joint F-test)		0.74		0.40
Observations		2085		2046

Notes: See Table 1

Table WA3. Analysis of Attrition in follow-up surveys by round

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
	Uganda						Malawi					
Dependent Variable	Attriter Follow-up I		Attriter Follow-up II		Attriter Follow-up III		Attriter Follow-up I		Attriter Follow-up II		Attriter Follow-up III	
Web Appendix B	0.01		0.00		-0.01		-0.01		-0.01		0.00	
	(0.01)		(0.01)		(0.01)		(0.01)		(0.01)		(0.01)	
Interactions Between Treatment and Covariate:												
Female		0.01		0.03		0.08		-0.03		0.03		0.01
		(0.03)		(0.03)		(0.031)***		(0.03)		(0.03)		(0.03)
Not Married		-0.11		-0.11		0.03		0.03		0.00		0.12
		(0.09)		(0.09)		(0.04)		(0.04)		(0.17)		(0.20)
Female x Not Married		0.08		0.07		-0.07		-0.01		-0.05		-0.16
		(0.10)		(0.09)		(0.05)		(0.04)		(0.17)		(0.20)
Household Size		0.00		-0.01		0.00		0.00		0.00		0.00
		(0.01)		(0.01)		(0.01)		(0.01)		(0.01)		(0.01)
Age (1/10s of years)		-0.08		-0.07		-0.02		-0.02		-0.06		-0.06
		(0.05)		(0.06)		(0.06)		(0.03)		(0.04)		(0.04)
Age Squared		0.01		0.01		0.00		0.00		0.01		0.01
		(0.01)		(0.01)		(0.01)		(0.00)		(0.004)*		(0.01)
Entrepreneur		-0.10		-0.08		-0.08		-0.09		-0.02		-0.04
		(0.056)*		(0.06)		(0.06)		(0.040)**		(0.04)		(0.04)
Farmer		-0.12		-0.07		-0.04		-0.06		-0.02		-0.03
		(0.057)**		(0.06)		(0.06)		(0.04)		(0.04)		(0.04)
Employee		-0.10		-0.06		-0.01		-0.05		0.00		0.02
		(0.062)*		(0.06)		(0.07)		(0.04)		(0.04)		(0.04)
Distance to closest branch in km		0.00		0.00		0.00		0.00		-0.01		0.00
		(0.01)		(0.01)		(0.01)		(0.00)		(0.00)		(0.00)
Log Value of Household and		0.00		0.02		0.02		0.01		0.01		0.01
Agricultural Assets		(0.01)		(0.01)		(0.01)		(0.01)		(0.01)		(0.01)
Years of education		0.00		0.00		0.00		0.00		0.01		0.00
		(0.00)		(0.00)		(0.00)		(0.00)		(0.00)		(0.00)
Adjusted R-squared	0.00	0.01	0.00	0.01	0.00	0.01	0.00	0.01	0.00	0.00	0.00	0.01
Observations	2159	2159	2159	2159	2159	2159	2107	2106	2107	2106	2107	2106
F-test p-value for joint significance of interaction terms		0.57		0.56		0.36		0.21		0.26		0.30
Mean of Dependent Variable	0.06	0.06	0.07	0.07	0.08	0.08	0.06	0.06	0.06	0.06	0.07	0.07

Notes: OLS regressions with robust standard errors in parentheses. All explanatory variables are measured at baseline. Regressions include the level of all covariates used in the interactions with treatment. Binary control variables were included for missing observations of a covariate, and then missing covariates were replace by zero. We also included two branch dummies for Uganda and one for Malawi. Significance levels: *10 percent, **5 percent, *** 1 percent.

Table WA4. Reported vs. Administrative Data

	Survey Data							Admin Data						
Panel A. Uganda														
Total Amount Deposited in Partner Institution Month Before Survey														
Web Appendix B	**Mean**	**sd**	**p95**	**p99**	**Share >0**	**Mean win**	**N**	**Mean**	**sd**	**p95**	**p99**	**Share >0**	**Mean win**	**N**
Follow-up I	1.54	13.94	3.68	40.50	0.06	0.79	1014	4.37	49.12	3.68	77.68	0.06	1.26	1014
Follow-up II	2.48	15.38	3.79	75.70	0.06	1.67	1002	3.34	23.69	0.00	102.20	0.05	1.53	1002
Follow-up III	2.47	20.61	2.57	53.17	0.05	1.05	999	1.39	15.76	0.00	36.67	0.03	0.20	999
Average	2.13	11.24	12.22	50.47	0.13	1.15	1041	2.94	22.54	12.27	63.09	0.10	0.97	1041
Average no missing	2.18	11.42	12.25	50.47	0.13	1.17	943	3.22	23.67	13.44	64.35	0.10	1.05	943
Balance in Partner Institution at the time of the survey														
Follow-up I	16.48	67.91	73.63	276.13	0.42	13.11	1010	15.92	83.75	59.05	301.99	0.36	12.55	1010
Follow-up II	18.40	109.27	88.95	272.53	0.37	14.35	997	12.91	64.51	51.35	250.13	0.37	10.22	997
Follow-up III	23.86	186.55	91.67	315.33	0.28	14.46	997	10.02	60.65	35.25	195.69	0.38	6.96	997
Average	21.02	139.92	85.87	247.93	0.49	13.91	1041	12.53	57.89	56.40	226.04	0.39	9.60	1041
Average no missing	15.94	44.37	84.34	212.37	0.51	13.79	945	13.63	60.62	64.51	235.75	0.40	10.40	945
Panel B. Malawi														
Total Amount Deposited in Partner Institution Month Before Survey														
Follow-up I	1.00	7.12	2.07	47.42	0.06	0.50	994	2.62	22.26	2.96	65.21	0.06	0.90	994
Follow-up II	0.23	1.91	0.00	10.56	0.03	0.13	988	2.45	17.11	1.23	70.43	0.05	1.19	988
Follow-up III	0.35	3.76	0.00	11.81	0.03	0.14	976	0.43	6.62	0.00	11.81	0.01	0.00	976
Average	0.55	3.38	1.76	17.78	0.10	0.27	1025	1.77	10.61	6.89	40.40	0.08	0.68	1025
Average no missing	0.49	2.72	1.58	17.72	0.10	0.25	941	1.92	11.06	8.22	48.97	0.09	0.73	941
Balance in Partner Institution at the time of the survey														
Follow-up I	10.60	53.99	41.50	231.20	0.35	7.86	993	8.57	45.49	49.29	207.48	0.37	7.14	993
Follow-up II	9.31	109.22	31.69	144.38	0.23	5.17	987	6.72	29.61	34.91	140.55	0.37	5.90	987
Follow-up III	6.51	31.49	29.53	150.59	0.19	5.19	975	7.59	51.45	38.13	117.86	0.38	5.14	975
Average	9.23	46.05	39.52	155.85	0.41	6.32	1025	8.14	42.15	43.12	143.68	0.38	6.15	1025
Average no missing	8.76	44.68	39.52	143.92	0.42	6.03	938	7.34	30.76	44.49	121.62	0.39	6.03	938

Notes: Mean win: mean after winsorizing the top 1% of all observations in our sample (including 0s and the control group observations). Average no missing: average for observations with no missing values in any round for both survey and administrative data.

Table WA5. Impacts on Flows: Deposits Last 30 days in 2010 USD. Non Winsorized

	(1)	(2)	(3)	(4)	(5)
	Deposits at formal financial institutions	Deposits in other sources			Total Deposits
		Mobile Money	Cash at home or in Secret place	ROSCA/VSLA	
Web Appendix B					
Treatment	0.239	-0.133	1.144	0.158	1.26
	(0.71)	(0.29)	(2.30)	(0.29)	(2.48)
Dep. Var. Mean in Control Group	2.04	0.74	6.94	2.54	12.28
Std. Dev.	29.60	11.26	36.06	8.90	50.35
Obs.	6,026	6,023	6,015	6,013	5,993
Number of Households	2085	2083	2081	2081	2077
Panel B: Malawi					
Treatment	0.153		-0.224	-0.041	-0.162
	(0.13)		(0.30)	(0.10)	(0.36)
Dep. Var. Mean in Control Group	0.40		1.82	0.69	2.95
Std. Dev.	5.07		12.98	3.36	14.92
Obs.	5,903		5,902	5,903	5,902
Number of Households	2,046		2,046	2,046	2,046
Panel C: Pooled Treatment	0.196		0.453	0.06	0.51
	(0.36)		(1.18)	(0.15)	(1.27)

Notes: Pooled regression including three waves of follow-up data 12, 18 and 24 months after baseline. We control for the baseline value of dependent variable if available, stratification dummies and wave dummies. Standard errors are clustered at the respondent level. For Malawi, data for savings in VSLA are only available for the second and third follow-up.

Table WA6. Impacts on Savings Stocks in 2010 USD. Non winsorized

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
								Loans[4]	
	Formal Financial Institutions[1]	Mobile money	Cash at home or in Secret place	ROSCA/ VSLA[2]	Friends/Family	Other cash savings[3]	Total Monetary Savings	Received Informal Loan	Received Formal Loan
Web Appendix B									
Treatment	6.478	-2.136	0.167	-0.864	4.147	-1.249	7.267	0.001	0.007
	(4.62)	(1.205)*	(3.71)	(0.98)	(4.57)	(0.93)	(7.83)	(0.01)	(0.01)
Dep. Var. Mean in Control Group	14.32	3.53	26.59	9.65	7.38	2.18	63.47	0.08	0.04
Std. Dev.	126.40	62.74	108.60	35.71	56.35	39.06	216.30	0.28	0.19
Obs.	6007	6027	6022	6028	6030	6017	5978	6033	6033
Number of Households	2085	2085	2085	2085	2085	2085	2085	2085	2085
Panel B: Malawi									
Treatment	5.148	-	-5.236	-0.589	-0.399	-	-1.182	-0.006	0.005
	(1.604)***	-	(2.561)**	(0.37)	(0.28)	-	(2.98)	(0.01)	(0.00)
Dep. Var. Mean in Control Group	3.78	-	13.47	3.12	0.77	-	21.25	0.04	0.02
Std. Dev.	38.29	-	126.00	13.58	12.32	-	136.10	0.20	0.14
Obs.	5900	-	5905	5906	5907	-	5898	5889	5889
Number of Households	2046	-	2046	2046	2046	-	2046	2040	2040
Panel C: Pooled Treatment	5.848	-	-2.615	-0.724	1.814	-	3.060	-0.002	0.006
	(2.471)**		(2.27)	(0.53)	(2.32)		(4.23)	(0.01)	(0.00)

Notes: Pooled regression including three waves of follow-up data 12, 18 and 24 months after baseline. We control for the baseline value of dependent variable (we replace missing values of dependent variables at baseline by 0 and include dummies for missing observations), dummies for stratification variables and wave dummies. Standard errors are clustered at the respondent level.

[1]Formal financial institutions include commercial banks, microfinance banks, and savings and credit cooperatives (SACCOs).

[2]For Malawi, data for savings in VSLA are only available for the second and third follow-up.

[3]Other cash savings: savings with shopkeeper or employer, farmer groups and village leader.

[4]In Uganda, data for having "ever" received a loan; in Malawi: data on having received a loan in the last 6 months, and we control at baseline with a varible on having "ever" received a loan. Informal Loan: from Rosca or Community Group (Uganda), Rosca, Village Bank or Moneylender (Malawi). Formal Loan: Bank, SACCO or MFI.

Table WA7. Impacts on Savings using Administrative Data instead of Reported Data

	(1)	(2)	(3)	(4)
	Deposits at formal financial institutions[1]	Total Deposits (including ROSCAs, home savings, etc.)	Saving Stock at Formal Financial Institutions[1]	Total Monetary Savings Stock
Web Appendix B				
Treatment	1.241	0.926	7.124	3.091
	(0.172)***	(0.559)*	(1.427)***	(2.46)
Dep. Var. Mean in Control Group	0.42	8.46	5.03	40.94
Std. Dev.	3.75	19.45	31.60	80.26
Obs.	6,027	5,994	6021	5991
Number of Households	2085	2077	2085	2085
Panel b: Malawi				
Treatment	0.73	0.603	3.963	1.463
	(0.092)***	(0.189)***	(0.739)***	(1.06)
Dep. Var. Mean in Control Group	0.12	2.03	2.15	13.87
Std. Dev.	1.19	6.06	15.08	32.57
Obs.	5,903	5,902	5904	5902
Number of Households	2,046	2,046	2046	2046

Notes: Pooled regression including three waves of follow-up data 12, 18 and 24 months after baseline. We control for the baseline value of dependent variable if available (we replace missing values of dependent variables at baseline by 0 and include dummies for missing observations), dummies for stratification variables and wave dummies. Standard errors are clustered at the respondent level. All dependent variables are top winsorized at the 99th percentile.

[1] Formal financial institutions include commercial banks, microfinance banks, and savings and credit cooperatives (SACCOs). For respondents that report at least one deposit in the financial institution we worked with, we replace reported balance by administrative data at the moment of the survey (in Uganda we replace balance in SACCOs by administrative balance and in Malawi we replace balance in commercial banks by administrative balance, without changing the other self-reported categories).

Table WA8. Additional Summary Statistics for Uganda and Malawi samples

	Uganda			Malawi		
	Mean	Standard Deviation	Monthly Equivalent Share of Total Expenditure	Mean	Standard Deviation	Monthly Equivalent Share of Total Expenditure
	(1)	(2)	(3)	(4)	(5)	(6)
Web Appendix B						
Total Self-Reported, last 30 days	30.09	35.93	100%	16.12	21.64	100%
Food, last 7 days	4.98	5.89	71%	4.28	5.29	114%
Durables, last year	14.21	46.48	4%	1.92	8.52	1%
Home Construction, last year	10.67	57.13	3%	0.19	1.19	0%
Education, last year	90.40	151.39	25%	4.83	15.69	2%
Health, last 30 days (monthly equivalent for Uganda)	9.44	21.87	31%	0.31	1.10	2%
Agricultural Inputs, last 30 days	1.55	4.50	5%	0.02	0.10	0%
Regrets*, last 30 days	2.39	5.15	8%	5.21	13.87	32%
Panel B. How they earn their money: Income by source (in 2010 USD)						
Calculated Total Labor Income, last 30 days	23.33	44.24	100%	21.10	39.14	100%
Selling Animals	3.13	13.82	13%	2.38	9.83	11%
Selling Animal Produce	0.29	1.98	1%	0.00	0.00	0%
Selling Crops	1.60	6.13	7%	0.34	2.00	2%
Selling Other Products	0.05	0.47	0%	0.20	1.21	1%
Business	15.24	34.34	65%	14.03	37.09	66%
Casual Work	2.89	8.06	12%	3.37	7.10	16%
Formal Work	0.14	1.15	1%	0.84	4.68	4%
Details on Farming Last Harvest						
Farmed at least 1 crop	0.87	0.33		0.96	0.19	
Sold at least 1 crop	0.66	0.47		0.50	0.50	
Value (in 2010 USD) of crops sold	48.66	100.80		85.87	133.83	
Percentage of the harvest consumed	84.21	18.37		86.81	20.17	
Panel C. Monetary Transfers (in 2010 USD)						
Total Received (excluding from spouse), last 90 days	12.42	27.51		4.58	12.16	
Total Given (excluding to spouse), last 90 days	3.14	9.53		0.74	3.67	
Total Received From spouse, last 30 days	3.20	8.97		0.00	0.00	
Total Given to Spouse, last 30 days	2.07	6.83		0.00	0.00	
Panel D. Shocks						
Any household member sick, last month	0.82	0.38		0.74	0.44	
Affected by Shock, last month	0.38	0.49		0.18	0.38	
Panel E. Savings (in 2010 USD)						
Rosca deposits, last month	2.06	6.14		0.00	0.00	
Adding to Home Savings, last month	2.40	7.03		2.15	6.98	
Saving Stocks						
Home Savings	13.35	33.13		7.73	23.46	
Roscas	4.50	13.77		0.20	1.41	
Friends/Family	3.47	17.29		0.90	5.04	
Panel F. Other Inflows of Money Last 30 days						
Witdrawals from Bank or Mobile Money	0.12	1.12		0.00	0.00	
Formal Loans	0.00	0.00		0.00	0.00	
Rents	0.14	1.03		0.06	0.50	
Remittances				0.70	3.21	
Pension				0.00	0.00	
Observations	2159			2107		

Notes: Values of the variables collected in Round 1 Survey (Oct-Nov 2010 in Uganda, Feb-Mar 2011 in Malawi). All continuous variables are top winsorized at the 99% and expressed in June 2010 US dollars.

*Regrets= total expenditures on goods people report it was a "bad idea" to purchase.