Financial Education and Savings Behavior: Evidence from a Randomized Experiment among Low Income Clients of Branchless Banking in India[1]

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Abstract

Financial literacy programs are popular, despite limited evidence that they lead to significant changes in savings behavior. We experimentally test the impact of financial literacy training on clients of a branchless banking program that offers doorstep access to banking to low income households. The intervention had significant impacts: total savings in the treatment group increased by 49% ($39) within a period of one year. The increase in savings is due in part to decreases in expenditures on temptation goods. These results suggest that financial education interventions can be successful in changing savings outcomes, though we are only able to speculate why the program worked in this context.

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I. Introduction

Thanks to innovations in new technology-based banking systems, between 500 and 800 million of the world's poor now have access to financial services (Deb and Kubzansky, 2012). However, the majority of these individuals are not prepared to interact with the growing complexities of financial products and services. Recent results from both developed and developing countries (summarized by Lusardi and Mitchell, 2014, 2011 and Xu and Zia, 2012) show low levels of financial literacy, including low knowledge and skills around basic concepts of personal financial management or more general banking practices.

A growing literature finds that financial literacy is correlated with household well-being, including participation in savings and investments (Behrman, et al., 2012 and Van Rooij, et al., 2011), and planning for retirement (Lusardi and Mitchell, 2007). This suggests that financial knowledge leads to responsible financial behavior among consumers, and so a rising number of countries are developing national financial education strategies and making more investments in related programs (Grifoni and Messy, 2012).

However, the evidence from field experimental research linking financial education and savings outcomes provides mixed results, and suggests there is little impact from trainings on actual savings behavior (see Miller, et al., 2015 and Kaiser and Menkhoff, 2015, for meta-analyses of the recent literature). For example, Duflo and Saez (2003) measure the impact of a benefit fair on retirement plan enrollment among employees of a university in the United States but found small effects on actual enrollment. Cole, et al. (2011) look at the impact of financial education training among the unbanked in Indonesia and find no substantial effect on savings behavior. In

Brazil, Bruhn, et al. (2013) look at a high school financial education, incorporated in the standard curriculum during three academic semesters, and reported impact on many outcomes, but not savings. Both Miller, et al (2015) and McKenzie and Woodruff (2014) summarize the results of a number of financial literacy training programs around the world and find few if any impacts on savings, though they note a number of issues with many of the evaluations that could affect the results.

There are also two recent studies that have found impacts from trainings on savings behavior: Sayinzoga, et al. (2015) work with smallholder farmers in Rwanda, and Jamison, et al. (2014) pair training with account access for Ugandan youth clubs (though the authors suggest that account access alone is a more cost effective intervention than training).

Along with the increased focus on financial education, there is also a mounting interest in improving access to formal savings institutions. In an ambitious strategy for financial inclusion, the Government of India has announced opening 150 million accounts for the low income and "unbanked" individuals with a target of catering at least two formal bank accounts to 75 million households by 2018.[3] There are, indeed, some important advantages to formal banking. Unlike village savings programs, banks offer privacy from family members and other villagers, decreased risk of theft or default, and reliability. When financed by NGOs or through government regulation, they can also be low cost or even free of any charges. Dupas and Robinson (2013a) find that in Kenya, for instance, giving female microenterprise owners access to such low cost savings

[3] "PM Narendra Modi launches 'Jan Dhan Yojana'", India Times, Aug 15, 2014.

accounts increased savings, productive investment, and food expenditures. Similarly, Prina (2015) shows that in Nepal giving female household heads access to bank accounts with no fees improved their overall financial situation.

Nevertheless, half of world's adult population still do not use formal financial services to save or borrow (Global Findex Database[4]). Many of these people participate in other savings options, such as ROSCAs, though the majority do not opt for formal savings—perhaps due to the lack of knowledge about formal banking's benefits or to the difficulty of access, since most banks are not near the poor and offer services that are not attractive to the low value depositors. Doorstep banking, also called "last mile" banking where the bank reaches out to those who cannot make it to the banks, can often be found in local retail shops, through agents who live in or near the villages, or through mobile banking vehicles or mobile phones —such as those being pioneered by M-PESA and M-KESHO (Demombynes and Thegeya, 2012). Doorstep banking makes it easier for people to handle formal savings accounts, though it is a new and still poorly understood idea.

In this study we measure the impact of a financial education program on financial literacy and savings behavior of low-income households in Uttar Pradesh. The intervention consisted of a two-day training delivered in a classroom setting among a random sample of 3,000 clients served by a doorstep banking facility. The training was delivered using a combination of different medium, including printed materials (leaflets, comics) and audio-visual tools. The training also included skits, role playing and classroom activities to engage participants. The contribution of

[4] Available at http://datatopics.worldbank.org/financialinclusion/.

this study is to explore the causal relationship between financial education and savings behavior when presented to people that have some experience with branchless banking.

We also implement a cross-experimental design where, in half of the treatment and control clients, a savings reminder was delivered through periodic phone calls and visits made by the agents of the branchless bank during the harvest season. The goal was to increase the salience of the training during a time when people might have more cash on hand and compare this to a simple, low cost reminder.

One year after the training, we find that the financial education intervention had a significant impact on savings. Individuals who received the training saved in total 49% ($39) more than the control group one year after receiving the training. Most of the effect comes from increased usage of formal savings in other bank accounts, notably so with the nationalized banks, and through a marginal increase in savings in the branchless banking account. The low levels of utilization of the branchless banking account may be due to low levels of trust in the branchless banking system, as we discuss below.

Increased savings appear to come in part from a decrease in temptation goods, while other spending, such as food consumption, remains unchanged. While a relatively significant decrease in unnecessary spending, it does not account for all of the increases in savings we observe. We also find no changes in income, and so we are not able to explain all of the observed savings effects.

Moreover, we find improvements on attitudes related to financial planning, but we do not find impact on financial knowledge or time preferences. These results suggest that financial

education can expand savings outcomes, even if it does not affect overall financial literacy or deep preference parameters. Such findings are potentially in line with recent evidence shedding lights on the constraints to formal savings in developing countries. For instance, Cole, et al. (2014) suggest that attitudes and trust, together with a cumbersome regulation, are the major obstacles in India to the usage of mobile banking. Along the same lines, Dupas, et al. (2014) maintain that lack of trust is the first reason justifying why people, in rural Western Kenya, did not begin saving in their bank account even when it was offered for free.

Different features of our financial literacy training might have contributed to its success, such as the delivery of simple and useful financial notions with real life examples, the diffusion of information through a video, and the classroom setting that might have generated peer effects. For example, Drexler et al. (2014) showed that a "rule of thumb" training (i.e. teaching easily implemented decision rules without explaining the underlying concepts) for micro-entrepreneurs in the Dominican Republic improved business practices, as compared to a control group that received a more complex accounting-based training. Along the same lines, Atkinson, et al. (2013) test the effect of different types of financial offers to open a bank account on microfinance clients about to get a new loan. The authors show that clients who, during the offer, were told that the bank was going to set a monthly deposit target at 10% of the loan payment had higher savings three years later – because the intervention eased the savings decision and provided useful information on what might be an optimal savings level. Similarly, Akbas et al. (2015) illustrate that, in Kenya, giving clients of a savings plan a golden-colored coin with numbers to be scraped out each week to visualize and keep track of deposits was more effective for increasing savings

than sending reminders or offering financial incentives. The authors argue that savings are abstract and it is hard to make sense of what are the implications of missing a deposit or what small deposits mean for a final goal. Also, results by Bernard, et al. (2014) from an innovative experiment in rural Ethiopia suggest that poor people save more when their aspirations are improved by a documentary illustrating examples of successful people from similar communities.

Furthermore, following a number of hypotheses put forward in the literature on financial literacy training, we look at heterogeneous effects of the program. As we do not present a formal model of why these heterogeneities may matter, we pull the specific tests from the literature and present them as exploratory findings only. We find four main results. First, financial attitudes increase more among less educated individuals. Second, increased interest in financial matters and a shift from informal to formal savings are found among individuals more financially educated at the baseline. Third, the intervention was less effective for more impatient individuals. Fourth, individuals assigned to treatment who already had a formal savings account increased their interest in financial matters, improved their overall financial knowledge, and saved more than the average in the treatment group. This suggests that a history of savings may be an important requisite for reaping the full benefits of the intervention and is in line with the literature on savings highlighting the significance of habit formation (De Mel, et al., 2013 and Akbas, et al., 2015).

We also find that the treatment effect does not come from changes in the doorstep banking account only, but is driven mostly by increases in savings deposit in other banking institutions. The trainers employed for delivering the intervention did not have strong incentives in encouraging subjects to save more in the doorstep accounts, and clearly the beneficiaries did not tradeoff their

preference for other (more important) banking features for convenience offered by the doorstep account.

Finally, the results of the cross-cutting experiment were surprising. In the subsample of households given saving reminders, we find that only savings in the doorstep account offered by the branchless banking slightly increased, while there was no effect on overall savings. We speculate that this may be due to people becoming tired or suspicious of the constant reminders, or that they spent the saved money more quickly than those that did not receive reminders before the endline data collection.

We recognize five important limitations to this study. First, the results we present here are short-term only, and so we cannot comment on the long-term impacts of this financial literacy program. It is possible that the impacts fade away over time, or perhaps increase. This is, of course, a common problem for most studies that rely on only one endline data collection to determine impact. Second, we cannot directly test why the current program worked to increase savings behavior when others have not. We discuss why we believe the lack of effect from trainings found in the literature thus far is due to individual lack of experience with savings in general, but this discussion is entirely speculative. Third, we cannot account for where the additional savings has come from. We have evidence that a significant amount is due to decreases in spending on temptation goods, but there is no change in income, other consumption behavior or other spending that can account for the full amount. Fourth, the experimental design does not allow us to identify the role of doorstep banking in our results. Recent work by Mehrotra et al. (2016) suggests that the presence of bank agents in villages can increase savings rates, but we cannot say how this

interacts with the results we obtain. Finally, the results we present are based on self-reported information and are, therefore, susceptible to a desirability bias: beneficiaries may have overstated their savings because they thought this was what the interviewer wanted to hear given the content of the intervention.

It is worth also noting that the cost of the program was relatively high compared with the observed effects. While this is not a limitation of the study itself, the cost of the program combined with the short-term time period of the results leads us to conclude that there are likely more cost effective ways to improve welfare in these households.

The rest of the paper is organized as follows. In Section II we discuss the program design and context. In Section III we outline the experimental design and the primary outcomes of interest and in Section IV present the data. In Section V we discuss the results. We then conclude with Section VI.

II. The Training Program and Context

The doorstep banking and financial literacy training was conducted in cooperation with FINO Paytech Foundation (FINO), a private financial services and technology company based in India and specialized in delivering technology-based banking services. FINO works with financial institutions to enable the poor and unbanked to access financial services by offering last mile service delivery through a number of portable devices, including biometric smart cards, hand-held devices and micro-deposit machines with biometric authentication. The model that FINO employs to reach out to households in rural areas uses Business Correspondents (BCs), also known as

"bandhus", who are permanently based in the villages where FINO operates and serve as the contact person between the financial institution and community members. This model helps introduce the bank to the poor, who are usually not familiar or comfortable with the traditional banking institutions, through a more personal interaction. To date, FINO has trained more than 30,000 bandhus, serving over 77 million customers, and it is growing close to a million clients per month.[5]

While doorstep banking has had enormous success in expanding access – as many studies that look at the impact of branchless banking have shown – access in and of itself does not make individuals financially more aware or literate (Thyagarajan and Venkatesan, 2008, in India, Dupas, et al., 2014, in Kenya). For example, out of the sample of 3,000 individuals randomly drawn from FINO's administrative database who had signed up for a bank account served by FINO, 88% were found to have made no transactions, with only 10% holding a positive balance.[6] While many factors could account for this shortcoming, including lack of financial resources, effective access and trust in branchless banking as well as individual biases, policy makers are concerned that low levels of financial literacy are a major constraint to the usage of such accounts (World Bank, 2014). Also, irregular presence of FINO bandhus[7] might result in low transactions by virtually limiting the access to transaction points. In the case of FINO, it is important to note that most of the

[5] http://www.finopaytech.com/images/FE_Banking_Special_March28.pdf
http://www.moneycontrol.com/smementor/news/finance-capital/fino-taking-banks-to-indias-poor-766580.html

[6] Source: Administrative data shared by FINO. Such picture also reflects the fact that bandhus received around Rs. 20-25 for signing up each client and so have an incentive to sign up as many clients as possible, not just those with a strong interest in banking.

[7] As found from the endline survey of FINO clients in April-May 2012.

individuals who signed up for bank accounts were provided instructions on how to use the smart cards and on the types of transactions they could make; they also had ongoing access to the bandhus for any question.

The intervention consisted of a two-day financial education training program and was implemented by FINO between May and August 2011 across two adjacent districts of the state of Uttar Pradesh. The clients randomly selected in the treatment group were invited and encouraged to attend the training, but no financial incentives were provided.

Table 1 illustrates the contents covered by the training. The intervention used a classroom setting to discuss key financial literacy topics with a combination of methods, including the use of flipcharts, role plays, and customized videos. It focused on providing comprehensive lessons to show how to prepare for a financially-secure future and improve financial well-being. It broadly described the steps involved in designing the savings and borrowing strategies that can help in getting started on the path to financial responsibility. Toward that objective, the intervention focused on four major sections: the concept of financial planning and budgeting; the importance of savings; smart borrowing practices; and the importance of insurance in risk mitigation. The intervention staff also handed out leaflets to the beneficiaries with concise summaries of the lessons learnt, focusing on how various formal financial instruments can be used for improving financial well-being. The contents of the major modules are described below.

Financial Planning and Budgeting: This module introduced the concept of financial planning and explained the various factors that need to be included in a financial plan. It provided examples of common life-cycle goals (including short-term, medium-term, and long-term goals)

and focused on the need for planning expenses for achieving these goals. The module emphasized the importance of identifying and minimizing superfluous expenses which can release funds for building up savings and, therefore, achieving fixed goals. It also described the constituents of a budget and provided examples to demonstrate how a deficit budget can be converted into a surplus budget by cutting down superfluous expenses.

Importance of Savings: This module stressed the importance of savings, especially the fundamental facts to be considered while saving (such as the importance of saving regularly in a formal bank account for managing future unforeseen needs). It described how small and disciplined savings can help to achieve one's goals. It used a graph to demonstrate how the mismatch between income and expenses due to uneven and lumpy life-cycle events can jeopardize financial future and lead to a poverty trap. It then emphasized the importance of wise cash management and savings by using a hypothetical scenario and comparing the financial outcomes of a person who can smooth income and expenses by means of regular savings and insurance products with the outcome experienced by a person who does not save regularly and does not use any insurance to mitigate risk. The module also demonstrated the importance of saving early by projecting how the same amount of regular savings in a formal instrument at different starting points in time can result in a difference in the amount accumulated at retirement age. It also explained the importance of investing surplus into savings instruments that offer compound interest by showing how the same amount of initial savings can lead to a large difference in accumulated savings under compound interest as compared to simple interest.

Smart Borrowing: This module described the difference between desire and need, secure and unsecure loans, or productive and unproductive loans. It explained how an unproductive loan can lead to an accumulation of debt and, eventually, a debt trap. It described the importance of borrowing from formal sources to avoid falling into a debt trap that often arises when borrowing from informal lenders, who offer high interest rates and enforce non-transparent terms and conditions while providing easy access to loans. It also pointed out various factors that need to be considered before taking a loan such as the repayment capacity, the interest rate, and the type of interest.

Insurance and Risk Mitigation: This module described the various types of risk that a household can face in daily life and introduced the concept of risk mitigation through insurance products. Using some examples, it explained how typical insurance products work and the usefulness of various popular insurance products.

The intervention also described the concept of transferring money using a formal payment system, presented various ways to transfer money, and highlighted the usefulness of a formal money transfer.

It is possible that the close collaboration between the banking and training staff contributed, at least in part, to the effects we find here. The FINO name is well known in the communities under study. While community members have reported trust issues with the FINO agents, mostly around a lack of access to the agent as often as promised, community members are aware of what FINO does, and how formal banking generally works. In addition, as the FINO agents were also present during the financial literacy training, it is possible that they might have helped

strengthening the effect of classroom training by reminding the clients about importance of savings during their regular interaction with the clients in the post intervention period. We are thus working with a sample that has a broad experience with banking, and possibly access to regular financial advice communicated through the agents.

III. Experimental Design

We conducted the experiment on a random sample of individuals in villages where FINO operates. Villages were randomly selected to either receive the training or receive no training. Individuals from treatment villages that had FINO smart cards were then randomly selected for financial education training.

The program was rolled out with the clients of 200 bandhus who were working in the villages of the two experiment districts of Varanasi and Azamgarh in the state of Uttar Pradesh. These bandhus were selected from the list of all FINO agents using a distance-based dropping method to prevent contamination between treatment and control groups. From a pair of bandhus who were located in villages very close to each other (less than 1.25 Kms), the evaluation team randomly dropped one bandhu to minimize spillovers; and it also dropped bandhus whose own service areas were far apart (more than 10 Kms) in order to make data collection and training easier. We then randomly assigned these 200 bandhus into treatment and control and, for each bandhu, 25 clients were randomly selected through FINO's client records updated in January 2011. Using these FINO records, pre-baseline randomization test were performed to ensure that the sample was well balanced with respect to available demographic and account activity information.

The results of the balance test showed that before the baseline there were indeed no observable differences between treatment and control FINO clients.[8] Finally, from the list of 25 clients, we drew a sample of 15 clients per bandhu for the survey interview.[9] So, in total, we selected 3,000 households for the baseline survey, which took place in April 2011, while the endline survey was conducted one year later, in April 2012. Around November 2011, the sample was further divided assigning half of the treatment and half of the control to receive the post-harvest intervention (house visit and reminder phone calls) and, as a result, four groups were formed: pure control, pure treatment, only post-harvest intervention, and treatment plus post-harvest intervention.

We are interested in two primary outcomes: 1) the impact of the financial education training on savings rates; and 2) the impact of the financial education training on budgeting skills, and financial knowledge and attitudes. The break-down of the analysis in these two dimensions will allow us to examine in more depth the impact of the intervention along the variables in the causal chain.

Furthermore, in order to understand whether there might be alternative and more cost-effective ways to deliver the message that saving is important, we try to investigate which elements are required for the success of the program. For this purpose, we introduced a cross-cutting intervention consisting of simple 10-minute house visits to stress the importance of saving in

[8] The variables included in the pre-baseline balance test were: percentage of female; share of clients in the age groups 18-24, 25-59, 60 and above, and share of clients who made at least one transaction in the 6 months period before February 2011.

[9] Buffers of 10 clients per bandhu were kept to ensure that, for each bandhu, the target of 15 clients could be surveyed. The first 15 clients (based on the sorting of randomly-assigned client ids) per bandhu were treated as the priority and the buffer only used in the extreme case where, in spite of making every effort, the survey team was unable to find the client from the original list.

formal instruments during the post-harvest period (when people have more money), followed up by monthly 5-minute phone conversations to remind people to save for a period of 3 consecutive months. Besides highlighting the importance of savings and the benefits of formal savings, this post-harvest intervention also included the setting of saving goals and the delivery of information about expected dates of bandhu presence in the area. Hence, we test whether a simple intervention is as effective as the classroom financial literacy training and we also check whether the post-harvest reminders can leverage the effect of the training.

IV. Data

a) Baseline Values

In Table 2 we present descriptive information to show how rural households in our sample saved money at the time of the baseline survey. To estimate savings, we rely on self-reported data, i.e. the respondents' recall of the balance amount in each formal account and informal savings tool.

In April 2011, mean formal savings were Rs. 4,376 ($51) or about twice the average monthly income, while mean informal savings (mostly home savings or savings in self-help groups) amounted only to Rs. 619, showing that, in our sample, formal savings are more prevalent than informal savings. Even though technically the entire sample had a no-frills savings account served by FINO, only 87% of households reported having an account through FINO, suggesting

that some clients were either not aware they had FINO accounts or did not understand what they were signing up for when they opened the account. [10]

Noticeably, even though about 94% of households reported having a formal savings account at the baseline, only 59% had a non-zero balance, suggesting that other constraints than access to bank services limited savings amounts. Considering only FINO accounts, the percentage is even lower: only 24% of households appeared to use the account for savings by keeping a non-zero balance.[11] Such baseline levels indeed present potential scope for financial education training to help develop better savings behaviors.

Further, almost 60% of FINO account holders also had at least one other formal savings account. About 51% had an account in a nationalized bank, 6% in a post office, 5% in a private bank and only 2% with an NGO (categories not mutually exclusive). This picture is similar to the percentages presented by Demirguc-Kunt and Klapper (2012) based on the nationally representative Global Findex dataset in India. They showed that in 2011, between 22% and 56% of the population (exact percentages depending on the income quintile) had an account at a formal financial institution. The fact that half of the respondents had a national bank account suggests that while banking may be difficult, considered unimportant, or expensive in the areas where FINO operates, people are interested in obtaining formal savings despite the extra costs. This finding also reflects that in 2006 the Reserve Bank of India imposed on all commercial banks the

[10] The no-frills savings accounts are the bank accounts are introduced by the Reserve Bank of India to cater the banking needs of low income households offering mostly deposit and withdrawal facilities with some restrictions on number free withdrawals, no/limited additional features such as internet banking etc.

[11] The low deposit in FINO account might have been aggravated by the problem of absence of bandhus in the areas and/ or by trust issues.

introduction of free no-frills accounts, which only allow for savings and do not offer interest rate returns, loans or other banking services (Thyagarajan and Venkatesan, 2008). Thus, in the study area, the extra cost of keeping another formal account consisted mostly in the traveling cost of reaching the nearest bank.[12]

To define our indicator of financial literacy, we follow the approach introduced by Cole, et al. (2011) and by Carpena, et al. (2011). The first paper presents the first nationally representative measure of financial literacy in a developing country, while the second study identifies "three distinct dimensions of financial knowledge": financial numeracy, basic awareness of financial choices, and attitudes toward financial decisions. Accordingly, our questionnaire covered different aspects of financial literacy, including budgeting skills, interest in financial matters, basic financial numeracy, financial products' awareness, and financial attitudes.

More specifically, budgeting quality refers to the skills of making a budget, writing it down, evaluating it as helpful, and being able to stick to it. Interest in financial matters covers responses regarding involvement in household financial matters and self-assessed understanding of information related to financial products. Table A1 presents the summary statistics for these first two measures of financial literacy. In the baseline, budgeting quality appeared to be particularly low: 73% of the respondents did not make a budget and, even when they did, they mostly kept it only mentally. A considerable fraction of individuals (24%) also reported not to be involved at all in financial matters and not to be actively interested in financial topics (48%). When asked about

[12] FINO estimated that in the villages where it chose to operate a bank branch was at least 4-5 kms away.

their understanding of financial product, almost half of the respondents stated that, in general, they rarely or never understood financial information, especially on loan and savings products. Even though these percentages might not represent a particularly alarming picture, they still signal a generalized lack of financial understanding and involvement.

Table 3 presents the descriptive statistics regarding financial knowledge and compares our results to the findings of Cole, et al. (2011) from rural India and Indonesia and of Carpena, et al. (2011) from urban India.

The first measure of financial numeracy is based on the study by Cole, et al. (2011), which is in turn very close to the work of Lusardi and Mitchell (2006) who pioneered the quantitative research on financial literacy. It includes a question on compound interest, along with one on interest rates vs. inflation.[13] The main purpose of these questions is to test respondents' understanding of basic economic concepts (i.e. inflation, interest rate, and compound interest), which are considered indispensable for making financial decisions. For this reason, we rename our measure of financial numeracy as 'understanding of basic economic concepts'. Our indicator appears to be in line with previous estimations: in our sample the mean share of correct answers is 71%, while it was 70% in the Cole, et al. (2011) sample representative of Indonesian population and 42% in the Cole, et al. (2011) sample of 1,500 poor households in rural Gujarat. Thus, our sample is more comparable with average samples in other developing countries than with Indian subsamples of poorer laborers in subsistence agriculture. It is possible that our sample is different

[13] See Table A2 in the Online Appendix for details.

from the Cole, et al. (2011) sample of 1,500 poor households in rural Gujarat who were predominantly poor subsistence agricultural laborers (selected for an intervention with weather insurance product), while only 16% of the clients in our sample were unskilled casual laborers. In addition, households in our sample already have savings accounts and also received some exposure to formal financial products from FINO agents who serve as source of information.

Second, to define basic awareness of financial choices, we follow the paper by Carpena, et al. (2011) who define this indicator as the "knowledge of fundamental financial planning concepts, as well as details of financial products, [such as] understanding of deposit insurance or of the purpose of a household budget" (pp. 13-14).[14] Since, in this case, the comparison is with a subsample from urban India, the means in our sample variables are on average lower, especially for more complicated concepts as the one of deposit insurance.

Finally, financial attitudes are also measured, as in Carpena, et al. (2011), by presenting hypothetical situations to respondents and asking them about the financial products or financial advice they would suggest in the given scenario. [15] Some of these questions have an ascending range of correct answers, so they are coded as continuous variables from 0 to 1 with 1 equal to the best financial option and 0.5 weight on the second best option. Again, with a mean of 0.68, our measure of financial attitudes is on average lower than the one presented by Carpena, et al. (2011). This indicator of financial attitudes can also be interpreted as a measure of "applied financial knowledge" since the questions included deal with real life situation where one could use in

[14] See Table A2 in the Online Appendix for details.
[15] See Table A2 in the Online Appendix for details.

practice his/ her financial understanding to suggest, for instance, an appropriate financial product to someone who is worried about meeting expenses if sick (Doi, et al., 2014). It could also be interpreted, though, as a proxy for hypothetical (unconstrained) financial choices.

b) Socio-Economic Background of the Clients and Balance Test

Respondents in our sample are of relatively low socio-economic status. Household heads are mostly males, 45 years old and about 40% are illiterate. Households are mostly Hindu and have on average 6-7 members, of which four are adults. About 70% of the households own land, with income from harvest contributing to roughly a fourth of the total income. The mean of the total household income was about the same as the mean of total household expenditures, suggesting that on average households did not manage to save much. In fact, about 10% of them had an outstanding loan.

Table 4 presents the results of the balance test relative to all the basic household characteristics. Unfortunately, not all the financial measures were perfectly balanced at baseline, in spite of the fact that randomization was successful and significant differences appeared only at a rate equal to that which would be given by chance. In order to avoid any bias that might arise in estimating treatment effects, we include all unbalanced variables as controls in the empirical analysis.[16]

[16] Variables unbalanced at baseline are whether the client has at least secondary education, whether the client had a loan, the number of females in the household, whether the client had a non-FINO bank account, and the level of overall financial literacy. These variables are included as controls in all regressions.

c) Endline Data Collection

The endline survey was administered in May to July 2012. It collected data on household behavior and respondents' financial wellbeing after the intervention. It covered information on basic household demographics; household assets, monthly income, and expenditure; household savings and indebtedness; respondents' money management and budgeting skills; respondents' financial knowledge and understanding of financial matters; respondents' time preference, and clients' experience with FINO services.

To minimize attrition, the survey team undertook a rigorous search for tracking back the baseline sample (including pre-endline house visits) and, in some cases, used the help of the bandhus to re-locate the households. These efforts ensured a low attrition rate: attrition was only 2.8% and 2.1% respectively, in the comparison and treatment groups. In Varanasi, out of 1,620 baseline households (including 840 treatment and 780 control clients), 1,599 households were revisited at the endline (of which 833 were treatment and 766 were control clients). In Azamgarh, out of 1,380 baseline households (including 720 treatment and 660 control clients) 1,599 households were revisited at the endline (of which 639 were treatment and 693 were control clients).[17] Furthermore, the baseline characteristics of households that left the sample were similar in the treatment and comparison groups, suggesting that the factors leading to attrition were the

[17] Migration and death of baseline clients were the main drivers of attrition at the endline. Out of total 63 baseline households that could not be surveyed, 37 households migrated, 19 clients died and rest refused to participate.

same and, consequently, that attendance and treatment status were unrelated. Therefore, attrition is unlikely to be a problem in our estimation strategy.

V. Impacts on Savings and Financial Literacy

a) Estimation Method

For our estimation, we employ an ANCOVA specification (McKenzie, 2012 and Bruhn and McKenzie, 2009).[18] In the case of monetary outcomes such as savings, consumption, and loans, we regress the outcome indicator on a series of treatment status dummies for household *h* controlling for the baseline value of the indicator:

$$(1)\quad Y_{h\,POST} = \alpha + \beta_1 PT_h + \beta_2 PT_h \times PH_h + \beta_3 PH_h + \eta\, Y_{h\,PRE} + \delta\, X_{h\,PRE} + \varepsilon_{h\,POST}$$

where X represents household control variables unbalanced at the baseline and standard errors are adjusted for clustering at the village/ bandhu level. The effect of pure treatment, i.e. the financial education training, is estimated by β_1, β_2 represents the effect of training combined with the post-harvest reminder intervention, and β_3 estimates the effect of reminders only.

[18] As a robustness check, we also replicated the estimation regressing the change in the outcome indicator (post-intervention value in levels minus pre-intervention value in levels) on the treatment status controlling for the baseline value of the indicator ($Y_{POST} - Y_{PRE} = \alpha + \beta\, T + \delta\, X_{PRE} + \eta\, Y_{PRE} + \varepsilon_{POST}$, as in Banerjee , et al., 2007). Such robustness check gave similar results confirming the validity of our estimates. We also conducted an instrumental variables test to obtain the Treatment of Treated (TOT) which is the Local Average Treatment Effect (LATE) and found consistent results.

In the case of financial literacy, we regress the outcome indicator on the treatment status of household *h* controlling for the baseline value of the indicator:

$$(2)\ Y_{h\,POST} = \alpha + \beta\, T_h + \eta\, Y_{h\,PRE} + \delta\, X_{h\,PRE} + \varepsilon_{h\,POST}$$

because the post-harvest intervention was not designed to provide additional financial education/ information.

As in other similar studies, the take-up rate for the financial literacy training was less than complete. Defining a client as having attended the program if he/ she attended the training session for at least one-hour, training attendance was irregular with only 80% of the invited ever attending a training session. In the Online Appendix, we present a list of baseline characteristics that might have influenced attendance status in the treatment group. There are no noticeable differences in savings or financial literacy levels between those that attended and those that were offered the training but did not attend. Also, clients who attended seems to be more likely females and of older age.

Finally, there may be concern that we test a large number of outcomes simultaneously. We therefore account for the multiple inference problem by calculating the Family-Wise Error Rate (FWER), i.e. the probability that at least one hypothesis out of a family of hypotheses is falsely rejected (type 1 error). We estimate the FWER using the Westfall and Young (1993) Stepdown Resampling Algorithm summarized by Anderson (2008), with 100,000 replications per family as

in Liebman and Luttmer (2015). In this case, we prefer the following OLS specification that regresses all the outcome indicators against the same set of controls:

$$(3)\quad Y_{h\,POST} = \alpha + \beta\, T_h + \delta\, X_{h\,PRE} + \varepsilon_{h\,POST}$$

b) Estimates of the Average Impacts on Savings

In Table 5 we look at the average impacts of the financial education intervention and post-harvest reminders on savings behavior. In columns 1-5 we explore the effect on the FINO savings account only, total formal savings without the FINO account, total informal savings, total cash savings, which includes both formal and informal savings, and finally total cash and asset savings, which is a combination of column 4 with the total value of assets bought in the last year. All savings amounts are top coded at the 99th percentile in order to eliminate outliers. The measure of assets includes self-reported value of land the individual has bought, livestock, gold and silver, farm and business equipment, vehicles, and other small household assets. We report all of these different measures of savings, though our preferred outcome is the total cash and assets as assets are a common way of saving money in Utter Pradesh.

We find that there was a modest increase in total savings in the FINO account for the training of Rs. 66 (95% C.I. 4-128). While this is in absolute terms a very small amount, it represents a significant increase over the control value of Rs. 86. Combining training with the post-harvest reminder doubles this effect. Reminders only have no effects.

Columns 2 shows there is a statistically significant and large positive effect on non-FINO formal savings of Rs. 2,617, which is an effect of approximately 53% over the control mean. The majority of this effect comes from saving in the nationalized banks. Combining the training with the post-harvest reminders does not produce a significant effect, though the coefficient size is large. This suggests that the post-harvest reminder not only failed to increase savings, it actually decreased overall savings.

We find no effect on informal savings in column 3. Column 4 combines the previous columns and shows a large impact of Rs. 2,648 (95% C.I. 846-4,450) or $39 (a 49% increase over the control mean) from the training program, with no effect from combining training with the post-harvest reminder, or the post-harvest reminder alone.

Finally, in column 5 we combine column 4 with reported spending on assets. Purchasing assets is a common form of savings in India, especially precious metals. We find a very large and significant effect from the training of Rs. 4,690 (a 43% increase over the control mean). The effect from combining training with the post-harvest reminder is small, but not statistically different from the training only effect. We also find a significant effect on the post-harvest only reminder, though this is half the size of the training effect.

c) Estimates of the Average Impacts on Financial Literacy

Table 6 illustrates the average impacts of the financial education intervention on changes in the different aspects of financial literacy (using standardized indicators[19]) and shows that the only dimension of financial literacy that appears to have been positively affected by the treatment is financial attitudes. The ITT estimates show that the intervention increased the average score for financial attitudes of individuals in the treatment group by 0.09 standard deviations (95% C.I. 0.01-0.17) or 4%. However, given the small effect size and multiple comparisons' results, we do not believe this effect is meaningful.

This result is somewhat in line with what was previously found in the literature and, in particular, can be related to the conclusions of Carpena, et al. (2011) that highlighted positive effects of financial literacy on financial attitudes and basic financial awareness. The exception is that our intervention did not seem to have any effect on financial awareness. However, this may be due to various reasons that might not ensure comparability of the results. First, the survey was answered by the FINO client only when he/ she was available and, in the remaining cases, by the other most knowledgeable person in the household. Therefore, we repeat the estimation on the restricted sample of clients who responded to both the baseline and the endline surveys because, even though this might be a selected sample, we need to check whether the absence of a significant impact on financial knowledge can be attributed to attrition bias. As shown in Table A5, the new results confirm our previous findings and, as before, the only significant treatment coefficient is

[19] Normalized scores for each dimension of financial literacy are calculated like school test scores, by first summing the results of each question belonging to that dimension and then standardizing by subtracting the mean pre-intervention score of the comparison group and dividing by the standard deviation of the pre-intervention scores of the comparison group as in Banerjee, et al. (2007).

the one on financial attitudes, but the magnitude of the impact is now higher. It could also be because our financial education training was tailored differently than previously evaluated financial education programs, as it was more focused on increasing savings and less oriented towards changing financial knowledge. In fact, even restricting the measure of financial knowledge to include only the questions that must have been well underlined in the training does not modify our results (columns 6 of Tables 6 and A5).[20]

Our findings are also similar to the results of Doi, et al. (2014) who found a positive and significant effect of financial education on financial attitudes and financial awareness, but they use an indicator of awareness that is more relaxed than other measures of financial knowledge. They assess it by asking respondents only whether they have heard about different financial products.

d) Estimates of the Average Impacts on Household Consumption and Welfare

Table 7 shows the average impacts of the financial literacy training on consumption. We do not find significant effects on spending on food, but we do find that individuals in the treatment group decreased their expenses on temptation goods such as cigarettes, tobacco, beetle nuts, and alcohol. This effect is statistically significant, and corresponds to an economically modest decrease of approximately $0.50 biweekly.[21] Nonetheless, it is a remarkable finding and the low magnitude

[20] We include in this indicator the following questions: question on financial numeracy number 2), questions on financial awareness number 1), 2) and 4), and questions on financial attitudes number 1) and 4). Thus, we exclude the following questions: question 1) on financial numeracy because it involves numerical skills that the training did not cover; question 3) on financial awareness because it deals with the concept of deposit insurance that was not explicitly included in the training program and question 2) and 3) on financial attitudes because they are framed in a very subjective way (see Online Appendix for the detailed list of questions).

[21] The treatment effect on temptation good expenses for the past 14 days is Rs. 25. If this effect was constant over time, on average the total treatment effect for the whole year would be equal to (25/14)*365= Rs. 652 or about 24%

might be due to general under-reporting of tobacco and alcohol expenses. Such result suggests that the intervention was successful in increasing savings at least in part through boosting commitment to save and changing money management. We do not find any effects on total consumption, however, due to the large but insignificant coefficient on food consumption.

We conclude our analysis of the effects on household wealth by illustrating the average impacts of the intervention on assets, loans, and income (Table 8). Clients were asked whether they bought or sold different types of assets including land and livestock, gold and silver, farm equipment, vehicle and other assets.

We find no significant effects on assets sold after the intervention and total loans. This suggests that clients did not increase savings through costly actions, i.e. disinvesting or borrowing money. On the contrary, it seems that after training individuals in the treatment group bought more assets. Looking at the breakup of assets, it seems that trained households mostly bought more liquid assets which are typically substitute of formal savings (gold and silver), and there was no impact of training on purchase of illiquid assets (such as land). We also do not find any effects on income.

e) Heterogeneity of Results

We continue this section by noting our results for heterogeneity analysis. The full results are shown in the online appendix. We do not present a full description of the results here to conserve space,

of the treatment effect on cash savings. It is possible that other changes in consumption in the last year that we cannot observe account for the remaining savings.

but also because we have limited prior beliefs about what potential heterogeneities might be important. As mentioned earlier, we thus focus on a set of heterogeneities that are common in the literature. Furthermore, most of the results do not hold after controlling for multiple comparisons, and so we present these only as exploratory.

We find four main results. First, financial attitudes increase more among less educated individuals. Second, increased interest in financial matters and a shift from informal to formal savings are found among individuals more financially educated at the baseline. Third, the intervention was less effective for more impatient individuals. Fourth, individuals assigned to treatment who already had a formal savings account increased their interest in financial matters, improved their overall financial knowledge, and saved more than the average in the treatment group. This suggests that a history of savings is an important requisite for reaping the full benefits of the intervention and is in line with the literature on savings highlighting the significance of habit formation (De Mel, et al., 2013 and Akbas, et al., 2015).

f) Multiplicity of Outcomes across Families

When we account for the multiplicity of outcomes across families and calculate the FWER p-values considering all our main outcome variables as belonging to one group, only the treatment effect on savings remains statistically significant – as shown in Table 9.

The procedure we use to estimate these results is as follows. First, for each family of homogenous outcomes presented in the same table we construct an index of standardized outcomes, i.e. the simple average of the outcomes within the family - standardized using the mean

and the standard deviation of the outcome estimated from control areas at endline. Second, in order to take into account the multiplicity of tests when doing inference, for each index we also report the corrected FWER p-value.

VI. Discussion

Our key finding is that the financial education program increased total cash savings on average by 49% (as compared to the endline savings of the control group). This effect appears to come in part from a decrease in temptation goods. After the endline survey, we also conducted a qualitative survey with 102 clients (82 from the treatment group and 20 from the control) in order to understand the causes of the success of the intervention. Confirming the results of the quantitative analysis, among treated clients, 95% declared to have saved more after the training, while only 20% of control clients indicated an increase in savings during the same period. In particular, clients from the treated group reported being able to save more thanks to gaining an understanding of how to save and of the value of saving, especially the value of accumulating small savings.

While our study suggests that programs offering simple and useful financial information can be successful in changing behaviors, the rather short-term horizon of the evaluation and the high cost of the program lead us to be concerned about advocating for such an approach. Further research should focus on identifying lower cost ways to disseminate financial information.

The remainder of this section focuses on two points. First, we speculate on why we have found impacts to savings behavior while others have not. We then end with a discussion of a simple cost/benefit analysis of the program.

a) Why Do We Find Impacts?

As mentioned in the introduction, previous experiments (except Sayinzoga, et al., 2015, and Jamison, et al., 2014) do not find an impact on savings from financial literacy programs in the developing world. Three main reasons could explain such a difference in results.

First, the program was delivered in conjunction with a doorstep banking service where FINO agents visit the clients in regular interval and discuss about the banking issues. As Schaner (2011) underlines, even if one considers the benefits of formal savings versus home savings, individuals might still be averse to saving formally when savings are small because bank accounts also have a fixed transaction cost and any difference between interest rates might not be attractive enough to outweigh it. When the transaction cost is reduced, individuals who were already using a bank account will make more deposits and withdrawals, while other individuals who were not using bank accounts will start to use them. Eventually, such increase in account use is likely to lead to higher formal (but not necessarily total) savings levels. However, even offering a formal banking service for free might not be enough if the quality of the service is not ensured and trust issues are not addressed. For example, Dupas, et al. (2014) emphasizes that efforts to expand financial access will effectively achieve financial inclusion only by comprising a communication component that brings awareness of the various financial options available.

It is possible that this financial education program was successful as a marketing campaign for FINO, helping to increase familiarity with and the perception of quality of the bandhus' service. During our endline survey, we asked respondents a full set of questions regarding their satisfaction

with the FINO account and we use the responses to investigate how much the marketing of FINO services contributed towards the impact of the program on savings. Table A8.A shows how the results change for average impacts on savings increments when we control for ex-post quality of the service.[22] The effect of the financial education program on FINO savings is diminished in magnitude; nonetheless, it retains its significance, suggesting that the program indeed had a direct impact on savings, apart from the indirect effect that it might have had by increasing the familiarity with and the perception of the quality of FINO service. Most importantly, the significant and positive effect of the financial education program on average total savings for the treatment group remains unchanged and even the magnitude of the coefficient is very close to the one in the estimation that does not control for quality. On the other hand, Table A8.A provides evidence suggesting that the quality of service is an important determinant of the amount of FINO savings. Table A8.B shows that there is indeed a substantial heterogeneity of impact depending on the frequency with which FINO agents visited the village: those who were assigned to treatment and were visited by a bandhu in the last 3 months increased their FINO savings by about Rs. 200.[23] It is feasible that the bandhus who visited the client households intensified the effect of training as they often remind the clients about the importance of savings. A post endline qualitative study with clients indicated that those who saved more quoted increased bandhu visit as an important factor behind increase in savings.

[22] We measure quality of service by exploiting the responses of clients to the following question: "How would you rate the overall FINO agent/bandhu service? Very bad, Not good, Satisfactory, Good or Very good?"
[23] For other types of savings, there was no heterogeneous impact due to the frequency with which FINO agents visited the village.

The second explanation for the success of this intervention is that the 49% increase in total savings may be linked to the 4% change in financial attitudes. While it is not possible to test the actual mechanisms at work here, we believe this indicator of financial literacy might represent "applied financial knowledge" as coined by Doi, et al. (2014), and it might be a proxy for the important ability of taking appropriate financial decisions in everyday life. Also, it might more generally measure the degree of familiarity with and confidence in the financial system since the questions are mostly about suggesting financially appropriate saving devices over more informal solutions. According to this approach, financial attitudes might be a proxy for trust in the formal financial system and, thus, might really be crucial for achieving an effective financial inclusion. This hypothesis can explain well why not only FINO savings increased, but also savings in other nationalized banks' accounts showed a positive and significant increment. Additionally, FINO bandhus accept only deposits in the basic no-frills account, and do not offer the term deposits, which are savings products with significantly better returns (approximately 3-4% higher). These term deposits are usually offered by the other public and private sector banks, which might have attracted the savings of the treatment group.

A third possible reason for success is that the program was so focused on responsible financial behavior (including savings and borrowing) that it directly encouraged savings and contributed in boosting attention and commitment towards savings, in addition to its effect on financial attitudes. This hypothesis is consistent with a growing body of literature on savings in developing countries that underlines the power of facilitating the mindset of saving money (Dupas and Robinson, 2013b). It is also consistent with our analysis of the heterogeneous effects of the

program, which highlight that the training was effective mostly among patient individuals. The intervention did not affect time preferences and did not offer a time-commitment device and therefore it could not be successful for people with higher discount rates. This further suggests that the program did not change deep preference parameters, instead affecting attitudes only toward saving.

b) Sources of Increase in Savings

Our results indicate that total savings has increased significantly among the treatment households. However, we are unable to account for the full increase in savings from our current survey indicators. A part of the observed increase in savings was financed through a fall in expenditure in "temptation good", although this is smaller than the observed increase. One possibility is that the treated households reduced their other "non- essential non-durable" expenses such as the ceremonial expenses. These expenses were discussed in one of the training modules that emphasized the importance of identifying and minimizing superfluous expenses which can release funds for building up savings. However, the ceremonial expenses were not captured in the survey, and thus it is not possible to test that hypothesis.

Also, the research team, while informally interacting with the treated households after the endline survey, found many instances where the treated clients (especially female clients) mentioned adopting a habit of setting aside a small portion of their earnings before handing it over to their spouses/head of the households. Thus, it is possible that the amount set aside contributed to increased savings through small and disciplined savings practices, although there was no

apparent increase in household's average monthly income during that period. Again, no data was collected on this specific indicator and so we cannot test for this explicitly.

c) Cost/ Benefit of the Program

The training cost $25 per participant if the cost of developing the video is not included (the cost of scaling the program with other bank clients in India) and $28 if the cost of the video is included (the cost of replicating the program elsewhere).[24] This cost is higher than that of a similar training, evaluated by Cole et al. (2011), which was estimated to cost $17 per-participant. Although we do not have complete information on the content and coverage of that intervention, the difference in cost could be due to the fact that FINO held a two day class-room setting training that used video based materials (leading to higher cost of venue to support video casting) in addition to standard printed training materials (such as leaflets, flip charts, etc.).

Considering that the intervention increased total cash savings by about $39, is this a sufficiently cost-effective program? Given that savings in all nationalized banks increased by only $34, the program might be too costly for one single financial entity to implement if the sole goal is to increase deposits. The intervention also does not perform well when compared to some other programs. Recent research on unconditional cash grants has found significant welfare improvements that increase over time[25]. It is highly likely that simply delivering the cost of the

[24] See Table A9 in the Online Appendix.
[25] See for example Blattman et al. (2014), who find large effects from a semi-conditional cash transfer program in Uganda that shifted individuals from subsistence level agriculture to skilled employment. Also, Haushofer and Shapiro (2013) find large household welfare effects from a fully unconditional cash transfer program in Kenya.

program to participants in the form of cash would have had greater welfare impacts, though not necessarily changing savings behavior. The results presented here though are only for short-term impacts and so may not fully reflect the total impacts of the program.

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Table 1: Content of the financial education training

Training Module	Contents	Methodology
Financial Planning and Budgeting	Discussion about session objective Instruction on how to keep track of income and expenses Creation of personal budget and its categories Allocation of Income among budget categories	Discussion, pamphlet, storytelling
Saving and Investment	Importance of regular saving Difference between savings and investments Importance of saving account and different avenues of saving Long-term saving and planning for major future event Different avenues of investment	Video, comics, storytelling, leaflets
Borrowing and Loan Management	Concepts of wise borrowing Different avenues of borrowing Planning personal loan management Planning for emergency needs to avoid over indebtedness	Video, comics, storytelling, leaflets
Mitigating Risk and Insurance	Meaning and usefulness of insurance Discussion of different insurance products Pension planning or target segments	Video, comics, storytelling, leaflets
Formal Financial Services Know-How	Basic know how about banking and allied services Need for including oneself in formal financial system	Videos, group discussion, leaflets

Table 2: Descriptive statistics on household savings

	Values	Observations
Formal Savings		
Amount of formal savings	4376	2926
Has a formal savings account (Dummy)	0.94	2926
Amount of formal savings (for those who have at least an account)	4649	2754
Amount of formal savings (for those who keep a non-zero balance)	7376	1736
Has a FINO account (Dummy)	0.87	2926
Amount in FINO account (for those who have it)	569	2457
Amount in FINO account (for those who keep a non-zero balance)	1984	704
Has a formal savings account other than FINO (Dummy)	0.57	2926
Amount of other formal savings (for those with a non-zero balance)	8292	1389
Has an account in a nationalized bank (Dummy)	0.51	2926
Has an account with post office (Dummy)	0.06	2926
Has an account in a private bank (Dummy)	0.05	2926
Has an account with NGO (Dummy)	0.02	2926
Has an account in a chit fund (Dummy)	0.01	2926
Has an account in a non-banking financial company (Dummy)	0.01	2926
Informal Savings		
Amount of informal savings	619	2928
Has an informal savings device (Dummy)	0.28	2928
Has savings at home (Dummy)	0.23	2928
Has savings with a self-help group (Dummy)	0.02	2928
Has savings with a neighbor (Dummy)	0.02	2928
Has savings with a friend (Dummy)	0.01	2928
Has savings with a shopkeeper (Dummy)	0.01	2928
Has other informal savings (Dummy)	0.01	2928

Notes: Baseline values. Monetary amounts in Indian Rupees (Rs.).

Table 3: Descriptive statistics and comparability of our measures of financial knowledge

Understanding of basic economic concepts

		Our sample	Cole, et al. (2011) sample from rural India	Cole, et al. (2011) sample from Indonesia
Compound interest	% Correct	70%	59%	78%
	% Do not know	15%	30%	15%
Interest rate vs. inflation	% Correct	71%	25%	61%
	% Do not know	11%	38%	16%
Both questions	% Correct on average	71%	42%	70%
Observations		2931	1496	3360

Financial awareness

		Our sample	Cole, et al. (2011) sample from rural India	Cole, et al. (2011) sample from Indonesia
Is one crop safer than multiple crops?	% Correct	31%	31%	28%
	% Do not know	8%	6%	4%
Observations		2931	1496	3360

	Mean in our sample	Mean in Carpena, et al. (2011) pure control from urban India
Knows to include both income and expenses in HH budget	0.77	0.85
Knows will get money back if bank closes	0.32	0.70
Knows borrowing money for Diwali is unproductive loan	0.70	0.62
All questions, on average	0.58	0.72
Observations	2851	221

Financial attitudes

	Mean in our sample	Mean in Carpena, et al. (2011) pure control from urban India
Advice to construction worker	0.66	0.81
Advice to friend with bright child	0.77	0.93
Advice to auto driver about loans	0.40	0.92
Advice about buying a TV	0.84	0.95
All question, on average	0.68	0.90
Observations	2901	221

Table 4: Sample characteristics and balance test

	Control	Only Post-Harvest Reminder	Only Treatment	Treatment and Post-Harvest Reminder	Equality of means p-value
HH head is male	0.71	0.71	0.73	0.72	0.734
Age of HH head	44.86	44.44	44.93	46.23	0.174
HH head is illiterate (Dummy)	0.39	0.38	0.39	0.41	0.623
HH head has secondary education (Dummy)	0.28	0.26	0.21	0.22	0.004
Religion is Hindu (Dummy)	0.93	0.97	0.94	0.95	0.015
Total number of members in the HH	6.87	6.64	6.91	7.03	0.173
Total number of adults (>=18)	4.14	3.93	4.08	4.14	0.188
Owns land	0.71	0.71	0.68	0.72	0.295
HH income from harvest	364.77	566.71	416.91	279.52	0.009
Total HH income	1691.93	1734.04	1461.63	1552.56	0.348
Food consumption	1563.42	1471.13	1461.25	1458.73	0.093
Food consumed outside home	24.99	32.74	25.73	21.89	0.155
Cigarette, tobacco, beetle nut, alcohol	68.01	58.78	54.22	56.43	0.089
Total consumption	1637.94	1546.31	1529.40	1510.18	0.059
Has an outstanding loan	0.10	0.08	0.12	0.12	0.029
Total outstanding loan amount	4863.71	3208.03	4307.55	4429.17	0.030
FINO savings	336.53	309.27	364.91	230.40	0.280
Non-FINO formal savings	2461.53	2031.16	2089.95	2269.35	0.626
Informal savings	288.04	386.85	385.23	309.64	0.481
Total savings	3255.58	2815.88	2960.63	2942.81	0.747
Budgeting quality	0.34	0.23	0.26	0.26	0.000
Interest in financial matters	0.46	0.42	0.41	0.41	0.000
Basic economics understanding	0.85	0.81	0.78	0.81	0.000
Financial awareness	0.58	0.57	0.56	0.55	0.018
Financial attitudes	0.78	0.77	0.76	0.75	0.023
Discount rate or Index of time preferences	2.84	2.82	2.91	2.80	0.378

Notes: Baseline values. Monetary amounts in Indian Rupees (Rs.) capped at the 99th percentile.

Table 5: Average impacts of treatment and post-harvest reminders on savings

	(1) FINO Savings	(2) non-FINO Formal Savings	(3) Informal Savings	(4) Total Cash Savings	(5) Total Cash and Asset Savings
Panel A. Intention-To-Treat Estimates					
Only Treatment	65.9**	2617***	-22.08	2648***	4690.2***
	(31.48)	(904.1)	(69.34)	(914.0)	(1363.4)
Treatment and Post-Harvest Reminder	122.1**	1146	19.0	1334	3861**
	(48.47)	(812.4)	(77.52)	(828.2)	(1494.1)
Only Post-Harvest Reminder	8.06	838.5	21.23	869.4	2182.9*
	(25.11)	(804.6)	(67.34)	(814.3)	(1393.4)
Observations	2666	2916	2918	2919	2919
R-squared	0.02	0.07	0.02	0.07	0.08
Mean of Endline Variable in the Control Group	85.8	4940.27	372.08	5415.55	10793.71
Panel B. FWER Estimates					
Intention-to-Treat Estimates	94.2	1426.93	-12.06		
P-value	(0.001)***	(0.014)**	(0.805)		
P-value FWER	(0.003)***	(0.029)**	(0.806)		
Observations	2699	2867	2867		
R-squared	0.02	0.12	0.03		

Notes: Standard errors are clustered at the agent/village level. Controls include the baseline values of the dependent variable and all the variables unbalanced at the baseline: whether the client has at least secondary education, whether the client had a loan, the number of females in the household, whether the client had a non-FINO bank account and the level of overall financial literacy. In Panel B, controls also include baseline total cash savings, consumption, loans, and monthly income.

Table 6: Average impacts on financial literacy using standardized indicators

	(1)	(2)	(3)	(4)	(5)	(6)
	Budgeting Quality	Interest in Financial Matters	Economic Understanding	Financial Awareness	Financial Attitudes	Financial Knowledge targeted by the intervention
Panel A. Intention-To-Treat Estimates						
Treatment	0.066	0.068	0.052	0.03	0.09**	0.071
	(0.13)	(0.06)	(0.04)	(0.04)	(0.04)	(0.05)
Observations	2921	2921	2921	2921	2921	2921
R-squared	0.08	0.01	0.04	0.03	0.02	0.03
Mean of Endline Variable in the Control Group	1.25	2.4	1.24	2.23	2.26	3.9
Panel B. FWER Estimates						
Intention-to-Treat Estimates	0.021	0.076	0.048	0.02	0.086	
P-value	(0.866)	(0.234)	(0.185)	(0.570)	(0.034)**	
P-value FWER	(0.866)	(0.551)	(0.551)	(0.815)	(0.156)	
Observations	2867	2867	2867	2867	2867	
R-squared	0.08	0.01	0.04	0.04	0.04	

Notes: Standard errors are clustered at the agent/village level. Controls include the baseline values of the dependent variable and all the variables unbalanced at the baseline: whether the client has at least secondary education, whether the client had a loan, the number of females in the household, whether the client had a non-FINO bank account and the level of overall financial literacy. In Panel B, controls also include baseline total cash savings, consumption, loans, and monthly income.

Table 7: Average impacts on consumption

	(1) Food Consump-tion	(2) Food consumed outside home	(3) Cigarette, tobacco, beetle nut, alcohol	(4) Total Consump-tion
Panel A. Intention-To-Treat Estimates				
Only Treatment	76.53	-3.89	-25.20**	57.65
	(61.23)	(19.69)	(12.10)	(78.72)
Treatment and Post-Harvest Reminder	56.59	-30.24	-29.28**	-12.25
	(66.36)	(19.26)	(12.77)	(85.36)
Only Post-Harvest Reminder	23.49	-0.48	-17.01	8.1
	(71.68)	(23.95)	(13.04)	(93.44)
Observations	2850	2829	2842	2885
R-squared	0.07	0.03	0.03	0.07
Mean of Endline Variable in the Control Group	1530.96	206.36	145.11	1878.60
Panel B. FWER Estimates				
Intention-to-Treat Estimates	41.72	-17.67	-20.25	
P-value	(0.379)	(0.259)	(0.034)**	
P-value FWER	(0.436)	(0.436)	(0.093)*	
Observations	2864	2841	2839	
R-squared	0.09	0.05	0.02	

Notes: Standard errors are clustered at the agent/village level. Controls include the baseline values of the dependent variable and all the variables unbalanced at the baseline: whether the client has at least secondary education, whether the client had a loan, the number of females in the household, whether the client had a non-FINO bank account and the level of overall financial literacy. In Panel B, controls also include baseline total cash savings, consumption, loans, and monthly income.

Table 8: Average impacts on assets, loans, and income

	(1)	(2)	(3)	(4)	(5)	(6)
	Land and Livestock Bought	Gold and Silver Bought	Total Assets Bought	Total Assets Sold	Loans	Individual Monthly Income*
Panel A. Intention-To-Treat Estimates						
Only Treatment	-44.91	978.1**	2071**	-259.2	574.7	4.17
	(300.2)	(483.7)	(797.9)	(474.5)	(1,592)	(38.71)
Treatment and Post-Harvest Reminder	83.27	1197*	2507**	-278.9	-1594	-8.65
	(317.9)	(640.9)	(1034)	(417.8)	(1716)	(40.84)
Only Post-Harvest Reminder	178.5	116.4	1268	251.2	-1198	-47.18
	(296.3)	(520.9)	(816.6)	(481.5)	(1520)	(41.64)
Observations	2921	2914	2921	2921	2899	2918
R-squared	0.01	0.02	0.03	0.02	0.04	0.91
Mean of Endline Variable in the Control Group	1500	2367.2	5378.16	2079.82	15527.02	1806.43
Panel B. FWER Estimates						
Intention-to-Treat Estimates			1749	-333.8	614.1	20.63
P-value			(0.011)**	(0.291)	(0.585)	(0.485)
P-value FWER			(0.064)*	(0.527)	(0.760)	(0.736)
Observations			2885	2885	2882	2866
R-squared			0.04	0.02	0.03	0.91

Notes: Standard errors are clustered at the agent/village level. Controls include the baseline values of the dependent variable and all the variables unbalanced at the baseline: whether the client has at least secondary education, whether the client had a loan, the number of females in the household, whether the client had a non-FINO bank account and the level of overall financial literacy. In Panel B, controls also include baseline total cash savings, consumption, loans, and monthly income. *In Column 6, the baseline monthly income is estimated through a recall question.

Table 9: Average impacts on main outcome indices

	(1)	(2)	(3)	(4)
	Savings Index	**Financial Literacy Index**	**Consumption Index**	**Assets, Loans, and Income Index**
	Includes the variables presented in Panel B of Table 5	Includes the variables presented in Panel B of Table 6	Includes the variables presented in Panel B of Table 7	Includes the variables presented in Panel B of Table 8
Intention-to-Treat Estimates	0.10	0.072	0.006	0.046
P-value	(0.014)**	(0.172)	(0.903)	(0.303)
P-value FWER	(0.052)*	(0.430)	(0.904)	(0.511)
Observations	2867	2867	2865	2867
R-squared	0.12	0.10	0.09	0.09

Notes: Standard errors are clustered at the agent/village level. Controls include all the variables unbalanced at the baseline (whether the client has at least secondary education, whether the client had a loan, the number of females in the household, whether the client had a non-FINO bank account and the level of overall financial literacy), along with baseline total cash savings, consumption, loans, and monthly income.

ONLINE APPENDIX

Heterogeneous Impacts

To test for heterogeneity in the treatment effect based on observable characteristics, we run the following set of regressions:

$$(4)\ Y_{h\,POST} = \alpha + \beta\, T_h + \gamma\, T_h \text{ x } TRAIT_h + \eta\, Y_{h\,PRE} + \delta\, X_{h\,PRE} + \varepsilon_{h\,POST}$$

where TRAIT is the vector of background characteristics along which theory would predict heterogeneity in the treatment impacts and where X includes also TRAIT among the controls. The effect of the treatment for the subgroup of people with a given trait is given by the sum of the coefficients β and γ and if γ is significantly different from zero then there is evidence of heterogeneity in the treatment effect for that trait.

We estimate equation (4) for the following different baseline characteristics: client education (at least secondary), the baseline measure of overall financial literacy, client gender, client's time preferences, the baseline level of household per capita total expenditures, and an indicator for having a formal savings account other than FINO at the baseline.[26]

Tables A6 and A7 show the heterogeneous treatment impacts on savings increments and on changes in financial literacy, respectively. In line with analysis conducted by Cole, et al. (2011),

[26] The tables shown focus only on the treatment effects, but the selected characteristics have significant direct effects, too. In particular, education and baseline financial literacy are significantly and positively correlated with endline savings and financial capability measures, being impatient decreases savings, females have less endline savings in national bank accounts and score worse in financial literacy, and those with higher baseline expenditures increase their financial numeracy skills.

who found that a financial education program had a modest effect and positively influenced financial behaviors only for those with limited education and financial literacy, we also test the role of education and baseline financial literacy to check whether our sample offers a similar picture. For education, there is no heterogeneity in the treatment effect on savings, but there is indeed heterogeneity in the treatment effect on financial attitudes. In particular, more educated people seem to have changed their attitudes less than other clients in the treatment group confirming Cole, et al. (2011) findings about greater effects of financial education on the less educated. On the contrary, the heterogeneous impact of baseline financial literacy runs in opposite direction with respect to what we would have expected based on Cole, et al. (2011) results. In our sample, those with better baseline financial literacy positively and significantly increased their interest in financial matters by 0.2 standard deviations (0.08 + 0.12) and even slightly increased their understanding of basic economic concepts by 0.11 standard deviations (0.06 + 0.05). Also, they significantly decreased their informal savings by Rs. 80 (-18 and -62). This finding might indicate that a sufficient prior familiarity with financial concepts helps in learning more during a financial education program.

Similar to the paper by Dupas and Robinson (2013b) on health savings, we also control for heterogeneity in treatment impacts for gender and time preferences. There is no heterogeneity for gender, but there is a strong heterogeneous effect for time preferences. Specifically, more impatient individuals (those with higher discount rates) increased their financial attitudes significantly less compared to an average client in the treatment group and even scored worse in budgeting skills. Accordingly, they also saved significantly less than average, and their total

savings after the training increased only by Rs. 195 (754–559, about $3). This result is in line with the Dupas and Robinson (2013b) findings on the importance of time preference bias in influencing saving behaviors. In fact, the authors showed that a simple safe box significantly helped people in rural Kenya to save more through a mental accounting effect; but such a basic technology was not useful for people with present-biased preferences who managed to save only when facing social pressure through a saving device with a strong social commitment feature (a health pot at a ROSCA).

Finally, we test for heterogeneity in the treatment effects based on baseline per capita total expenditures and on whether the client already had another formal account other than FINO. The results show that there is almost no heterogeneity in expenditures, while there is a heterogeneous impact for those clients who had also a non-FINO formal savings account. It seems that those who already had a formal non-FINO savings account, increased their interest in financial matters by 0.19 standard deviations (0.27–0.08) and they even slightly expanded their overall financial knowledge (i.e. only including the questions that must have been stressed in the training) by 0.01 standard deviations (0.14–0.13). Moreover, after the training, they also saved more experiencing an increment in total savings equals to Rs. 2,544 (2,012 + 532). Thus, these results possibly indicate that the intervention was more effective in influencing the behavior of the clients who already had an exposure to formal savings bank accounts, rather than those who were linked with the banking system for the first time through the no-frills savings account served by FINO.

Table A1: Descriptive statistics on budgeting quality and interest in financial matters

	Mean Values	Observations
Budgeting Quality		
Makes a budget	0.27	2922
Writes the budget (if applicable)	0.05	798
Has been helped by the budget (if applicable)	0.04	798
Is able to stick to the budget (if applicable)	0.03	798
Interest in Financial Matters		
Is involved in financial matters (Dummy)	0.76	2642
Generally understands loan information (Dummy)	0.52	2630
Generally understands savings information (Dummy)	0.58	2659
Generally understands insurance information (Dummy)	0.62	2726
Actively seeks information about financial topics (Dummy)	0.52	2726

Table A2: Questions on Financial Knowledge

Financial Knowledge Indicator	Questions
Basic Economic Understanding	1) "Suppose you need to borrow Rs. 5,000. Two people offer you a loan. One loan requires you pay back Rs. 6,000 in one month. The second loan also requires you pay back in one month, Rs. 5,000 plus 15% interest. Which loan would you prefer?" 2) "Imagine that you saved Rs. 1,000 in a saving account, and were earning an interest rate of 1% per year. If prices were increasing at a rate of 2% per year, after one year, would you able to buy more than, less than, or exactly the same amount as today with the money in the account?"
Financial Awareness	1) "Do you think the following statement is true or false? For a farmer, planting one crop is usually safer than planting multiple crops." 2) "Shanti is preparing a budget for her household. Which of the following needs to be included in the budget? Income only, expenses only, both." 3) "If you have a savings account in a bank and the bank closes down for some reason, will you get your money back?" 4) "Manoj recently borrowed some money from a local moneylender. He needed this money to buy some clothes for his children for Diwali. Is that Manoj loan is a productive or an unproductive loan?"
Financial Attitudes	1) "Ramesh does plastering on tall buildings. It is a dangerous job and he is worried that if he is injured, his family's income will become inadequate to meet their needs. If Ramesh comes to you for advice, what would you suggest: i. Take up some other (different) work; ii. Purchase health/life/ accident insurance; or iii. Increase savings?" 2) "Vimla has a very bright child who is currently in secondary school, but will probably do well in university. She is worried how her family will pay for the child's education. If Vimla comes to you for advice what would you suggest she i. Buy child life insurance policy; ii. Borrow money from a moneylender; iii. Open a savings account in a bank; iv. Save at home; or v. Discontinue education?" 3) "Naresh currently drives a rented auto rickshaw. He wants to purchase his own auto rickshaw but does not have the money and is considering taking out a loan for the same. If Naresh comes to you for advice would you suggest he take out a loan?" 4) "Sajid recently got married. He and his wife are considering buying a TV. They do not have enough savings and will need to take out a loan. Sajid has two options: he can take a loan from the moneylender and a relative and get a bigger loan to use to buy a big TV or he can take a loan only from a relative and buy a smaller TV. What would you advise Sajid and his wife to do?"

Table A3: Non-response rates for the outcome measures showed in Table 5

	(1)	(2)	(3)	(4)
	Pre Intervention		Post Intervention	
	Treatment	Control	Treatment	Control
Savings				
FINO Savings	0.03	0.03	0.07	0.05
Formal Savings	0.00	0.00	0.00	0.00
Non-FINO Formal Savings	0.00	0.00	0.00	0.00
Nationalized Banks Savings	0.07	0.05	0.03	0.04
Informal Savings	0.00	0.00	0.00	0.00
Total Savings	0.00	0.00	0.00	0.00
Savings considering only pure treatment and pure control				
FINO Savings	0.03	0.03	0.07	0.05
Formal Savings	0.00	0.00	0.00	0.00
Non-FINO Formal Savings	0.00	0.00	0.00	0.00
Nationalized Banks Savings	0.06	0.05	0.03	0.04
Informal Savings	0.00	0.00	0.00	0.00
Total Savings	0.00	0.00	0.00	0.00
Financial literacy				
Budgeting Quality	0.00	0.00	0.00	0.00
Interest in Financial Matters	0.03	0.02	0.00	0.00
Financial Numeracy	0.06	0.05	0.00	0.01
Financial Awareness	0.02	0.02	0.00	0.00
Financial Attitudes	0.01	0.01	0.00	0.00

Table A4: Attendance

	Attendance
FINO Savings (Ln)	0.004
	(0.004)
non-FINO Formal Savings (Ln)	-0.002
	(0.005)
Informal Savings (Ln)	0.007**
	(0.003)
Budgeting Quality	-0.004
	(0.01)
Interest in Financial Matters	-0.004
	(0.011)
Basic Economic Understanding	0.008
	(0.012)
Financial Awareness	-0.017
	(0.012)
Financial Attitudes	0.015
	(0.012)
Client is Female	0.046**
	(0.022)
Client's Age	0.003***
	(0.001)
Client's Education (At Least Secondary)	0.001
	(0.029)
Discount Rate	-0.005
	(0.008)
Client Had a Non-FINO Formal Savings Account	0.021
	(0.034)
Baseline Per Capital Total Expenditures (Ln)	-0.028***
	(0.009)
Varanasi District	-0.083***
	(0.022)
Observations	1395
R-squared	0.04

Table A5: Average impacts on financial literacy for the subsample of clients who answered both the baseline and the endline survey – using standardized indicators

	(1) Budgeting Quality	(2) Interest in Financial Matters	(3) Basic Economic Understanding	(4) Financial Awareness	(5) Financial Attitudes	(6) Financial Knowledge targeted by the intervention
Treatment	0.006	0.091	0.039	0.002	0.112**	0.06
	(0.142)	(0.080)	(0.043)	(0.047)	(0.050)	(0.063)
Observations	1588	1588	1588	1588	1588	1588
R-squared	0.09	0.02	0.04	0.05	0.04	0.05

Notes: Standard errors are clustered at the agent/village level. Controls include the baseline values of the dependent variable and all the variables unbalanced at the baseline: whether the client has at least secondary education, whether the client had a loan, the number of females in the household, whether the client had a non-FINO bank account and the level of overall financial literacy.

Table A6: Heterogeneity of impacts on savings

	(1) FINO Savings	(2) Formal Savings	(3) Non-FINO Formal Savings	(4) Nationalized Banks Savings	(5) Informal Savings	(6) Total Savings
Panel 1. Heterogeneous Impacts for Client's Education (At Least Secondary)						
Treatment	90.12***	1231**	1120*	868.4*	9.89	1229**
	(28.50)	(589.7)	(586.1)	(515.9)	(52.64)	(601.4)
Treatment X education	-9.17	1874	1829	2220	-95.73	1747
	(55.91)	(1605)	(1597)	(1473)	(108.7)	(1639)
Observations	2666	2916	2916	2661	2918	2919
R-squared	0.89	0.08	0.07	0.08	0.61	0.09
Panel 2. Heterogeneous Impacts for Baseline Financial Literacy						
Treatment	86.80***	1720***	1594**	1439**	-18.10	1683**
	(29.03)	(641.1)	(636.4)	(583.6)	(51.64)	(652.3)
Treatment X baseline financial literacy	-16.62	499.4	437.3	590.4	-62.31*	428.8
	(25.88)	(516.4)	(506.2)	(454.2)	(36.62)	(523.1)
Observations	2666	2916	2916	2661	2918	2919
R-squared	0.89	0.08	0.07	0.08	0.61	0.09
Panel 3. Heterogeneous Impacts for Client Gender (Female Dummy)						
Treatment	65.91**	1703**	1594*	1222	-33.12	1660*
	(32.59)	(835.6)	(829.8)	(782.6)	(63.94)	(849.7)
Treatment X female	53.89	-45.34	-76.71	424.1	49.52	-22.85
	(34.08)	(1060)	(1061)	(950.9)	(83.91)	(1076)
Observations	2666	2916	2916	2661	2918	2919
R-squared	0.89	0.08	0.07	0.08	0.61	0.09
Panel 4. Heterogeneous Impacts for Time Preferences (Discount Rate)						
Treatment	143.6**	-510.6	-801.8	-566.5	-109.5	-558.5
	(59.84)	(1281)	(1284)	(1195)	(102.8)	(1292)
Treatment X discount rate	-18.90	745.6*	800.0**	677.1**	32.92	753.9*
	(18.63)	(405.4)	(400.2)	(343.1)	(34.73)	(412.8)
Observations	2633	2877	2877	2626	2879	2879
R-squared	0.89	0.08	0.07	0.08	0.61	0.09
Panel 5. Heterogeneous Impacts for Baseline Per Capital (PC)Total Expenditures						
Treatment	84.59***	1287*	1150	1080*	-12.66	1256*
	(28.49)	(696.0)	(697.3)	(643.5)	(50.56)	(702.2)
Treatment X PC total expend	0.01	1.75	1.8	1.49	-0.03	1.72
	(0.03)	(1.73)	(1.8)	(1.48)	(0.04)	(1.73)
Observations	2656	2906	2906	2653	2908	2909
R-squared	0.889	0.082	0.075	0.085	0.611	0.091
Panel 6. Heterogeneous Impacts for Whether the Client Had Already a Non-FINO Formal Savings Account						
Treatment	68.00*	599.4	591.7	989.9	-52.83	532.2
	(35.42)	(860.8)	(854.2)	(718.4)	(69.13)	(875.1)
Treatment X had non FINO formal savings account	36.30	1949	1744	746.1	71.86	2012*
	(36.32)	(1190)	(1177)	(1062)	(81.84)	(1203)
Observations	2666	2916	2916	2661	2918	2919
R-squared	0.89	0.08	0.07	0.08	0.61	0.09

Table A7: Heterogeneity of impacts on financial literacy

	(1) Budgeting Quality	(2) Interest in Financial Matters	(3) Economic Understanding	(4) Financial Awareness	(5) Financial Attitudes	(6) Targeted Financial Knowledge
Panel 1. Heterogeneous Impacts for Client's Education (At Least Secondary)						
Treatment	0.099	0.054	0.062	0.053	0.121***	0.088
	(0.13)	(0.07)	(0.04)	(0.04)	(0.05)	(0.06)
Treatment X education	-0.141	0.058	-0.04	-0.093	-0.13*	-0.072
	(0.23)	(0.1)	(0.06)	(0.08)	(0.07)	(0.1)
Observations	2921	2921	2921	2921	2921	2921
R-squared	0.08	0.01	0.04	0.03	0.03	0.03
Panel 2. Heterogeneous Impacts for Baseline Financial Literacy						
Treatment	0.064	0.078	0.056	0.027	0.09**	0.07
	(0.13)	(0.06)	(0.04)	(0.04)	(0.04)	(0.05)
Treatment X baseline financial literacy	-0.021	0.123**	0.049*	-0.044	-0.006	-0.007
	(0.09)	(0.05)	(0.03)	(0.03)	(0.03)	(0.04)
Observations	2921	2921	2921	2921	2921	2921
R-squared	0.08	0.01	0.04	0.03	0.02	0.03
Panel 3. Heterogeneous Impacts for Client Gender (Female Dummy)						
Treatment	0.073	0.066	0.045	0.006	0.055	0.074
	(0.15)	(0.07)	(0.04)	(0.04)	(0.05)	(0.06)
Treatment X female	-0.017	0.008	0.018	0.062	0.088	-0.006
	(0.17)	(0.08)	(0.05)	(0.06)	(0.06)	(0.08)
Observations	2921	2921	2921	2921	2921	2921
R-squared	0.08	0.02	0.04	0.04	0.03	0.03
Panel 4. Heterogeneous Impacts for Time Preferences (Discount Rate)						
Treatment	-0.448**	0.082	0.046	-0.078	-0.04	-0.077
	(0.23)	(0.13)	(0.07)	(0.09)	(0.09)	(0.11)
Treatment X discount rate	0.179***	-0.004	0.001	0.035	0.045*	0.05
	(0.06)	(0.04)	(0.02)	(0.02)	(0.03)	(0.03)
Observations	2881	2881	2881	2881	2881	2881
R-squared	0.08	0.01	0.04	0.03	0.03	0.03
Panel 5. Heterogeneous Impacts for Baseline Per Capital Total Expenditures (Ln)						
Treatment	0.674	-0.333	0.272**	0.028	0.176	0.342*
	(0.50)	(0.22)	(0.13)	(0.18)	(0.16)	(0.19)
Treatment X PC total expenditure	-0.114	0.077*	-0.041*	0.0004	-0.016	-0.052
	(0.09)	(0.04)	(0.02)	(0.03)	(0.03)	(0.04)
Observations	2911	2911	2911	2911	2911	2911
R-squared	0.08	0.01	0.04	0.03	0.03	0.03
Panel 6. Heterogeneous Impacts for Whether the Client Had Already a Non-FINO Formal Savings Account						
Treatment	0.103	-0.083	0.065	0.048	0.075	0.143**
	(0.15)	(0.08)	(0.04)	(0.05)	(0.06)	(0.062)
Treatment X had Non FINO formal savings account	-0.067	0.273***	-0.024	-0.031	0.027	-0.131*
	(0.17)	(0.1)	(0.05)	(0.06)	(0.07)	(0.07)
Observations	2921	2921	2921	2921	2921	2921
R-squared	0.08	0.01	0.04	0.03	0.02	0.03

Table A8.A: Average impacts on savings controlling for quality of FINO services

	(1) FINO Savings	(2) Formal Savings	(3) non-FINO Formal Savings	(4) Nationalized Banks Savings	(5) Informal Savings	(6) Total Savings
Treatment	43.53*	1632**	1560**	1443**	-14.98	1609**
	(23.17)	(672.2)	(667.9)	(601.8)	(51.15)	(686.2)
Quality of FINO services	81.80***	186.5	85.97	60.33	-7.083	181.6
	(11.83)	(262.7)	(255.0)	(226.6)	(23.49)	(269.6)
Observations	2619	2863	2863	2614	2864	2865
R-squared	0.06	0.07	0.07	0.08	0.02	0.07

Notes: Standard errors are clustered at the agent/village level. Controls include the baseline values of the dependent variable and all the variables unbalanced at the baseline: whether the client has at least secondary education, whether the client had a loan, the number of females in the household, whether the client had a non-FINO bank account and the level of overall financial literacy.

Table A8.B: Heterogeneity of impacts on FINO savings for FINO agents' presence

	FINO Savings
Treatment	-0.28
	(13.36)
Treatment X FINO agent visited	199.5***
	(74.5)
FINO agent visited in the last 3 months	203.5***
	(42.67)
Observations	2666
R-squared	0.11

Notes: see above Table.

Table A9: Cost calculations

Breakdown of intervention cost	USD
Trainer salary + conveyance	20635
Beneficiary engagement (incentive + incidentals)	6905
Training venue	4482
FE Material (printed handout + other)	6000
Video production cost	4000
Total beneficiaries	1500
Cost per beneficiary: Without video component	25
Cost per beneficiary: With video component	28