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THE EFFECT OF SAVINGS ACCOUNTS ON INTERPERSONAL FINANCIAL RELATIONSHIPS:
EVIDENCE FROM A FIELD EXPERIMENT IN RURAL KENYA

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ABSTRACT

The welfare impact of expanding access to bank accounts depends on whether accounts crowd out pre-existing financial relationships, or whether private gains from accounts are shared within social networks. To study the effect of accounts on financial linkages, we provided free bank accounts to a random subset of 885 households. Within households, we randomized which spouse was offered an account and find no evidence of negative spillovers to spouses. Across households, we document positive spillovers: treatment households become less reliant on grown children and siblings living outside their village, and become more supportive of neighbors and friends within their village.

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1 Introduction

Financial markets in developing countries are quite limited, especially in rural and relatively sparsely populated areas. Consequently, many financial transactions occur between individuals, without the formal intermediation of banks or insurance companies. Perhaps unsurprisingly given that people lack liquidity and effective punishment strategies, these inter-personal relationships leave gaps – numerous studies over the past several decades document that such methods do not fully overcome credit, savings or insurance market failures (see Karlan and Morduch 2010 for a review). The inadequacy of such informal methods is the fundamental motivation for the microcredit movement as well as the more recent explosion of microsavings and microinsurance.

This paper is about the effects of expanding access to formal savings accounts among the unbanked population in rural Kenya.¹ A number of recent papers have shown that providing such accounts can be privately beneficial to the person receiving the account.² However, there is much less evidence on the indirect effects of such programs on other individuals within account holders' networks. Quantifying these spillover effects is important in determining the ultimate welfare effects of expanding financial access, but it is unclear whether spillovers will be positive or negative. On the one hand, expanding access to accounts may crowd out interpersonal networks since savings accounts will make autarky more attractive (Ligon, Thomas, and Worrall 2000). On the other hand, the gains from the account may be shared within social networks.³ In this paper, we shed light on this question using a randomized field experiment involving 885 households in rural Kenya.

We first document that usage of the savings accounts was modest on average, but was substantial among a subset of active users: while 69% of households who were offered an account opened one, only 15% made at least 5 transactions in the account over the 28-month period following account opening. This 15% used the account quite a bit – among active users, the mean amount deposited in that 28 months was \$223 (a sum about 5 times monthly expenditures of roughly \$43 in the control group). We examine effects on a number of downstream outcomes, and find no negative effects on any outcomes, and some evidence of a positive effect on food security.

The main focus of this paper is to document the effect of the accounts on intra- and inter-

¹Bank account ownership is still quite low in the developing world (Chaia et al. 2009; Kendall, Mylenko, and Ponce 2010), and is only about 15% across Sub-Saharan Africa (Aggarwal, Klapper, and Singer 2013).

²Among others, see Dupas and Robinson (2013a), Prina (2014), Brune et al. (2015), Kast et al. (2014), Callen et al. (2014) and Bruhn and Love (2014).

³See Kinnan and Townsend (2012) for evidence that households indirectly linked to banks through kinship networks are better able to access finance than other households. In a different context, see Angelucci and de Giorgi (2009) for evidence on how conditional cash transfers are shared within social networks in Mexico.

household financial linkages. To examine intra-household issues, in dual-headed households, the experiment randomized which spouse received the account. Thus, there are households in which only the husband received an account, households in which only the wife did, and households in which neither or both spouses did. We examine inter-household outcomes in two ways. Directly, we examine whether treatment affects transfers given and received. In addition, during the baseline we collected information on transfers that households gave and received. By matching these partners to the treatment list, we can construct a simple measure of how saturated the baseline network was with accounts.⁴

On the intra-household side, we find that respondents preferred to open individual accounts – although all respondents were given the option of opening the account jointly in the spouse’s name, only 5% of households did this. We find that individual ownership strongly predicts usage – both men and women significantly increase bank savings if they are given an account in their own name, but do not increase savings if only their spouse is given an account. In our setting, men saved more than women on average – consequently, usage was significantly higher in households where the husband was offered the account, relative to households where only the wife was, suggesting a rejection of the unitary household model. However, we find no evidence that this differential usage affected any downstream outcomes. In particular, male and female private expenditures were both unaffected by treatment, as were intra-household transfers from husband to wife (and vice-versa).

In contrast, we find evidence that inter-household linkages were affected. The households in our study send and receive transfers quite regularly, though the pattern of giving and receiving varies substantially across types of partners. Our survey asked about the relationships to partners, separately within and outside the village. Households tend to receive much more than they give from grown children, adult siblings, and other relatives, who primarily reside outside the village. We call these “remittance-type” of relationships, and as in earlier studies we find that those are, in terms of magnitudes, the primary component of financial networks (e.g. Rosenzweig and Stark 1989, Jack and Suri 2014). On the other hand, the pattern of sending and receiving transfers among friends and neighbors within the village is more give-and-take: households give out just as much as they receive from friends, neighbors and parents, who primarily live nearby. The size of these transfers are modest relative to the remittance-type transfers. We call these “give-and-take” relationships.

We find differential effects of our account offer across the two types of transfers. Regarding the first type, treated households are less likely to receive (but no less likely to give) money

⁴The network data we collected did not represent a full mapping of the village, however. We are therefore unable to conduct a more formal network analysis, for example by examining how effects vary with the centrality of a household.

from remittance-type partners. This result suggests that gaining access to an account makes households less dependent on others. Since there is no evidence of negative effects on other outcomes, the reduction in support from others is not harmful to households but instead indicates that households impose less upon these individuals. The type of dependence we document at baseline is not unique to our context. For example, Platteau (2000) shows that there is also a strong social norm in West Africa to support friends and relatives if asked for money. This can act as a tax on relatively wealthy households, which in turn may lessen the private return to economic activities and possibly discourage investment. In the extreme, such pressure could create a poverty trap (Hoff and Sen 2006). There is some evidence in support of such sharing taxes limiting productive investment. Baland, Guirkingier, and Mali (2011) present evidence that middle-class Cameroonian households take on costly loans that they do not need to signal poverty in order to avoid requests from others. Jakiela and Ozier (2015) show that women in rural Kenya are willing to pay a substantial cost in order to hide income from their relatives. In South Africa, di Falco and Bulte (2011) show a positive correlation between the size of the potential kinship network and durable good investment, which is less liquid and therefore potentially harder to share. In Kenya, Dupas and Robinson (2013b) find that individuals who appear to be net “givers” in their financial relationships network are more likely to demand and benefit from commitment savings products. Ligon (1998) and Kinnan (2014) show that hiding income limits the effectiveness of informal insurance in India and Thailand, respectively.

Our paper shows that an intervention aimed at the dependent household can lessen this tax. Specifically, our results suggests that improving financial access among poor rural households may have positive spillover effects on relatively richer households often located outside the intervention area. This implies that hidden income is a limited concern within family networks. This is consistent with Chandrasekhar, Kinnan and Larreguy (2015), who show through a lab in the field experiment that the effect of hidden income on transfers is mitigated among pairs who are socially closer.

In regards to risk-sharing types of transfers within the village, we find evidence of positive effects. Treatment households are more likely to send transfers to such partners (and no less likely to receive transfers). Households with baseline networks more saturated with partners who were offered accounts are not differentially affected, however, possibly suggesting that treated households expanded the set of partners in their give-and-take network. It is also possible that measurement error explains the small results from the spillover analysis. In any case, we do not find a breakdown of social insurance as modeled in Ligon, Thomas and Worrall (2000). An important reason for this is that the savings products modeled in Ligon, Thomas and Worrall are purely for consumption smoothing, whereas the accounts provided

in this experiment potentially also benefited households in other ways (as was captured by the positive effects on food security and other outcomes).⁵ To the extent that such an increase might be shared within networks (e.g. Angelucci and de Giorgi 2009 in the context of the Progresa program in Mexico), this would mitigate any possible negative effect on risk sharing.

This paper is one of a recent handful of studies to examine the spillover effects of savings accounts. Each of these studies find evidence that spillover effects are present, though the findings appear to vary with the context and the sample studied. Comola and Prina (2014) find that the introduction of savings accounts to women in Nepal caused them to increase the number of financial partners they transacted with, within the village. Dizon, Gong, and Jones (2015) examine the effect of savings accounts on a sample of vulnerable women (sex workers, widows, separated women, and single mothers) in Kenya. They find that savings accounts had no effect on transfers with “core connections” (give-and-take connections, in our terminology) but crowded out transfers (given and received) to extended connections (remittance givers, in our terminology). The reduction in transfers received is similar to our own finding, though the reduction in transfers given is different. This is likely attributable to differences in sample composition: in particular, the sample of vulnerable female-headed households in Dizon et al. receive about 3 times more from core connections as from extended connections, whereas in our sample of all unbanked households respondents receive about 5 times more from remittance-type partners than from give-and-take partners. Several other studies look at the conceptually separate but related issue of how savings accounts affect pre-existing group-based savings clubs such as ROSCAs. Dupas and Robinson (2013b) find that gaining access to a private savings box decreased participation in ROSCAs, while Callen et al. (2014) find that access to formal savings increased ROSCA participation in Sri Lanka, possibly owing to the positive labor supply effect they document.

The remainder of the paper proceeds as follows. Section 2 describes the experimental design and Section 3 presents the data and some summary statistics on interpersonal financial relationships in our sample. Section 4 presents the effects of the savings account offer on households, followed by a description of the effect on intra- and inter-household transfers in

⁵While we are unable to document specific pathways through which savings accounts may have benefited program households, there are several likely candidates. Accounts may allow people to diversify their portfolio of productive assets, particularly in cases where investment is lumpy (see Dupas and Robinson 2013a for evidence that female market vendors increased investment in response to obtaining savings accounts). Access to savings could also help households mitigate costly ex post responses to shocks, or increase labor supply (see Callen et al., 2014 for evidence of such effects in Sri Lanka). Moreover, the mere fact of being offered a private savings account could lead individuals to revise upwards their business investment goals and to activate new mental accounts for these goals (see Schaner 2014 for evidence that short-term incentives to save had large impacts on business investment through these mechanisms in the same area of Kenya as ours).

Section 5. We then discuss and conclude.

2 Experimental Design

2.1 Study Context

The study took place in a rural area of Kenya’s Busia District in Western province. Banking options in the study area are relatively limited, as large bank branches are located only in major towns, and the villages in our study are far enough from a town that the cost of traveling there for banking is prohibitive. Locally, there are only two options: a “village bank,” owned by share-holding villagers and affiliated with a microfinance organization, and a partial-service branch (essentially a sales and information office with an ATM) for a major commercial bank. Both banks have substantial account opening and maintenance fees: at the onset of the study, the Village Bank had a \$3.75 account opening fee and a \$1.25 minimum balance requirement, though no account maintenance fees; the commercial bank had no account opening fee but a \$2.50 minimum balance requirement, as well as a \$0.60 monthly account maintenance fee. Both also featured sizeable withdrawal fees, ranging from \$0.10 to \$1.25 depending on the size of withdrawals.⁶ The Village Bank did not pay interest on deposits; effectively, neither did the commercial bank (interest was only earned if the account balance exceeded a very large amount). Deposits at the village bank are not insured. Both institutions offer credit, though with somewhat stringent criteria.⁷

Besides banks, there are several other ways to save. A majority of people keep at least some money in cash at home. Many people (34% of men and 54% of women in our sample) participate in Rotating Savings and Credit Associations (ROSCAs). A third possibility is to save in “mobile money,” a service offered by cell phone companies in which people who own a cell phone number can deposit, withdraw and transfer money by visiting a local “cash point” (see Jack and Suri 2014 and Mbiti and Weil 2011). Take-up of mobile money accounts grew rapidly over our study period, from 31% of households reporting having an

⁶For the commercial bank, the withdrawal fee was \$0.37 for ATM withdrawals and \$2.5 for over-the-counter withdrawals. For the village banks, the withdrawal fee was \$0.125 for withdrawals below \$12.5, \$0.25 for withdrawals between \$12.5 and \$62.5, and \$1.25 for withdrawals above \$62.5. The median withdrawal size we observe in our data was \$9.16.

⁷The Village Bank requires the formation of a group of at least 5 people who approve the purpose and amount of each other’s loans, and who serve as mutual guarantors. To take out a loan, borrowers must purchase a share in the bank, and are then eligible to borrow up to four times the value of shares owned at interest rates between 1.25 and 1.5 percent per month (16-19% APR). The commercial bank grants microloans to existing businesses for individuals who have had an account with any commercial bank for at least 3 months. Two guarantors and full collateral are required for each loan, which must be repaid within 6 months, at an interest a rate of 1.5 percent per month (19% APR). See Dupas et al. (2012) for evidence that demand for credit was limited.

account in 2009 to 58% in 2012, but the primary use of mobile money is to make transfers. At the end of our study, only 15% of households reported saving on their mobile account, about the same proportion as those using a bank account in our treatment group. We can think of a number of reasons why mobile money had not become a major savings tool in our study area by 2012. First, not everyone has a cell phone (only 52% of households in our sample owned a cell phone at endline). Second, saving through mobile money is not cheaper than regular banks, as mobile providers charge relatively large withdrawal fees. Third, mobile money agents, especially rural ones, sometimes lack the liquidity they need to honor all withdrawal requests as they come, so that there is no guarantee that money can be withdrawn immediately.

In addition to high fees, the service provided by the banks was on the whole very poor. As shown in Dupas et al. (2012), many people reported that the banks were unreliable (with limited opening hours and frequent unannounced closings). Many also reported that they did not trust the banks, especially the Village Bank which had a recent banking scandal at one of its branches.⁸ Overall, the accounts offered many disadvantages relative to other options, including even keeping cash at home. This begs the question of why anybody would use the accounts at all; if anybody does use them, this suggests that the problems of keeping money elsewhere (such as the risk of overspending or giving it away) are quite large. In any case, these disadvantages will depress usage and attenuate the potential for spillover effects.

2.2 Sampling Frame

This study took place in the catchment area of banks in three market centers in Western Kenya. A census of all households in these catchment areas was carried out between August and September 2009. The census survey collected information on demographic characteristics of the household, sources of income, as well as access to financial services, knowledge and perceptions of available financial services, and saving practices. A total of 1,898 households were surveyed during the census exercise. Only 20% of these households had a member with a bank account, despite the fact that the average distance to the closest deposit-taking financial institution was (by design) only 1.6 kilometers, suggesting that physical access was unlikely to be a limiting factor. Account ownership was predominantly male: 21% of men had a bank account, against only 10% of women.

Of the 1,898 households in the census, about half (989) were selected to participate in the study. Those households excluded from the study were those with at least one bank account holder (20%), and relatively atypical households, i.e. polygamous households (8%)

⁸Trust in banks within Kenya may also be lower because of its history of banking scandals and various pyramid schemes (see Dupas et al. 2012 for more detail).

and households with no female head (11%). Of the 989 sampled households, we could survey both (when applicable) household heads in survey round 1 in 931 cases, and again in at least one of the following rounds in 885 of the cases. Our analysis sample thus consists of 885 households for whom we have at least one follow-up survey round.⁹

2.3 Randomization

Out of the household sample, we created a sample of household heads. This individual-level sample included either one or two individuals per household: the female head for single female-headed households, and both the female and male head for dual-headed households. We then randomized these individuals into treatment and control groups. The randomization was done in May 2010, after stratifying the sample by household composition (single female-headed or dual-headed), primary occupation, and market center. Note that the randomization was conducted at the individual, not the household level. Thus, among dual-headed households, while there are households in which either, both, or neither spouse got the account, the size of each group was determined by chance – and consequently, the four groups are not equal sized. Table A1 shows the final breakdown of households in our analysis sample. Among dual-headed households, 17% had no one assigned to the treatment, 33% had both heads assigned to the treatment group, 26% had only the female head assigned to treatment and 24% had only the male head assigned to treatment. Among single female-headed households, 49.6% were assigned to the treatment group.

2.4 Treatment: Savings Accounts

Individuals selected for the treatment received a nominal, non-transferable voucher for a free savings account. As mentioned above, the study took place around three market centers. In one of these market centers, both the Village Bank and the Commercial Bank have a branch, and the voucher was redeemable at either bank. In the other two market centers, only the Village Bank had a branch, so respondents in those markets were given a voucher redeemable only at the Village Bank. The experiment waived all account opening and maintenance fees, but did not cover any withdrawal fees. In total, the subsidy amounted to \$5 for accounts at the village bank and \$2.50 plus \$0.60 a month for maintenance at the commercial bank. The commercial bank account came with a free ATM card.

⁹Since all households in the study did not have bank accounts at baseline and since richer households are more likely to have accounts, households in the final study sample are poorer, less educated, and more likely to be farmers than the average household in area. A comparison between our study sample and the census of households we started with is provided in Dupas et al. (2012), Table 1.

The vouchers were delivered to people in their homes between late May and early July 2010. During that visit, individuals received information on how the banks and accounts worked, and when and how to redeem the voucher. Upon opening the account, individuals could choose to open the account jointly with their spouse or alone. Sixty-nine percent of vouchers that were distributed were redeemed. Only 5.7% of accounts that were opened were joint accounts.¹⁰

3 Data and Background Facts on Interpersonal Financial Relationships

3.1 Data and Timeline

We use three sources of data. First, the census survey, carried out in late summer 2009, collected information on demographic characteristics, sources of income, access to financial services, and saving practices more generally.

Second, we have administrative data on deposits, withdrawals and loan applications from the two banks in our study area, up until September 2012 (about 28 months after the initial account opening in May 2010). All study participants that opened an account agreed to sign a waiver allowing their bank to release their bank statements to the research team. We use these bank statements to monitor the saving activity as well as the credit history of those sampled for the account offer.

Third, we administered six rounds of a comprehensive survey, including modules on savings, farming and non-farming activities, consumption, expenditures, and transfers between spouses and between households.¹¹ The surveys took place over approximately 2 years, and were administered roughly every 4-5 months (the specific timeline is presented as Appendix Figure A1).¹² Because we sampled both female and male heads in dual-headed households, we have surveys for both. By summing up answers across these surveys (making sure to avoid double-counting for joint expenditures or income sources), we can compute household-level

¹⁰The vouchers expired after 2 weeks. In practice, most of those who redeemed did so immediately. Commercial Bank customers had to visit the branch twice, once to redeem the voucher and again two weeks later in order to pick up their ATM cards and receive training in their use.

¹¹The look-back period for these measures varied. For transfers, respondents were asked about the last 3 months; for shocks, income, and expenditures, respondents were asked over the past 30 days. Since farming is seasonal (there are 2 growing seasons per year in this part of Kenya), respondents were asked in a certain round for the most current season (each relevant season was asked about in at most one monitoring survey).

¹²The first survey round took place between February and May 2010, before the account treatment was rolled out. Round 2 took place between July and September 2010, round 3 between October and December 2010, round 4 between February and May 2011, round 5 between July and September 2011 and round 6 took place between March and July 2012, slightly more than two years after the first round.

outcomes.

3.2 Attrition

In any given round, we consider a household as surveyed (and include that household in the analysis) if all household heads were surveyed. In other words, for dual-headed households, we ignore from the analysis a household-round observation with only one head surveyed (since for those we do not have the household-level outcome). Appendix Table A2 presents regressions of attrition. We have fairly low attrition overall: we surveyed 94% in round 3, 94% in round 4, 91% in round 5, and 89% in round 6. The most common reasons for attrition was that the respondent was temporarily away at the time of the survey round. We also had some permanent relocation of the respondent outside our study sample, and a few deaths. From Panel A, differences in attrition rates are statistically indistinguishable from zero with the exception of round 6, where dual headed treatment households were 9 percentage points more likely to be interviewed than dual headed control households. From Panel B, we observe no evidence of differential attrition. From Panel B, we observe little difference in attrition rates between subgroups among dual-headed households. Overall, differential attrition appears to be somewhat of a concern. To gauge the extent to which it affects our ability to draw causal inference, in what follows, we show that the experimental arms are balanced in terms of observable characteristics *post-attrition*. For all analyses in the remainder of the paper, we also perform “placebo tests” testing whether the treatment effects estimated are already there when estimated on the first survey round, before the treatment was actually implemented. Reassuringly, the effects we observe in follow-up rounds are not there pre-treatment, suggesting that the differential attrition is unlikely to explain our results of interest. Finally, we use ANCOVA regressions as the specification for all our results (controlling for baseline values of the dependent variable) which reduces the likelihood that baseline imbalance will bias results.

3.3 Characteristics of Study Sample and Balance check

Table 1 presents some summary statistics on the households in the final analysis sample of 885 households, and checks for balance in those characteristics by household type (dual-headed households and single-headed female households). Columns 1 and 3 present sample averages, while Columns 2 and 4 present p-values for tests of equality between the control and treatment groups. Nearly all of the treatment-control differences are small and statistically insignificant.

Average education is around 6 years for female heads and 7 years for male heads. The

average household has around 5 members. Average land size is 1.82 acres and total assets (besides land) are worth about \$237 on average (the exchange rate at the time of the baseline survey was around 80 Ksh to US\$1). Cell phone ownership is 40%. While every household is involved in subsistence farming, many have other jobs as well: 43% engage in casual work, 34% sell farm produce, and 28% have a market business.

By construction none of individuals in the sample had a bank account at baseline. In contrast, as mentioned earlier, they have a relatively high rate of participation in ROSCAs. When encountering shocks, people report relying primarily on support from others rather than on self-insurance: when asked how they would deal with an emergency that required 1,000 Ksh (about 20% of monthly household expenditures) urgently, only 3% of the respondents responded that they “would use savings” only. The most common coping strategy reported was, instead, borrowing from relatives or friends.

Finally, since Round 1 of the survey was conducted before the accounts were opened, we can perform a placebo test to check that pre-treatment levels of the savings and downstream outcomes of interest were similar across treatment and control. These tests are performed in Web Appendix Tables WA1-WA6 (corresponding to main Tables 4-9). On the whole, these placebo tests show minimal differences across groups.

3.4 Background facts on interpersonal financial relationships

3.4.1 Inter-household transfers

Table 2, Panel A documents the patterns of transfers that households give to and receive from other households. The bottom line is that households in our sample are much more likely to receive transfers than to send them, and on the whole are financially dependent on other households. All the households in our sample are rural, and are quite poor on average. They do, however, have relatives (adult children and siblings) who have moved out of the area and are better off (pointing to the role of intranational migration from rural to urban areas in increasing incomes), and who provide some support.

The panel tabulates transfers in two ways: by relationship and by inside or outside the village. In total, households had received an average of \$112 over the 3 months prior to the survey, and gave only \$31. Most of what they receive comes from outside the village, whereas only half of what they give leaves the village. Tabulating transfers by relationship type reveals that the two most important relationship types are adult children and siblings (who tend to live outside the village). Households receive significant sums from these sources, but send back very little: the average household received \$45 from adult children and sent out only \$3; the average household received \$29 from siblings and sent out only \$6. The

pattern of giving and receiving is more equal for other relationships: households give about as much as they receive from neighbors and support parents, but the amounts involved here are dwarfed by the other transfers.

In the analysis, we separately analyze these two types of financial relationships. We classify those relationships with an inflow/outflow ratio above the mean (which is 3.66) as “remittances” – these include children, siblings, other relatives, and the “other” relationship category. We classify those below the mean as “give and take” relationships – which include friends, neighbors, and parents.

3.4.2 Intra-household allocation

Table 2, Panel B presents summary statistics on several intra-household outcomes, including transfers, income, and expenditures.¹³ The overall picture is one in which women earn and spend significantly less than men, and are financially dependent on men. As can be seen from the top of the panel, men commonly transfer to women (82% of men did this in the 30 days preceding the survey, and the average amount transferred was \$10.67), whereas transfers from women to men are much less common (occurring just 28% of the time, and amounting to only \$1.13 on average). The table also shows cash income over the past 30 days (a measure which does not include prorated value of harvest income). On this measure, men make about 70% more than women (\$22 vs. \$13). These differences translate into expenditures: men spend about \$37 per month, compared to \$21 for women. Men are bigger contributors to household public goods such as food, household items, and children, but also have about 3 times higher personal expenditures (\$6 vs. \$2).

4 Direct Effects of Account Offer

4.1 Take-up of accounts

Table 3 presents summary statistics on take-up of the savings account. Sixty-nine percent of treatment households opened an account. Among households in which both spouses were offered an account, 81% of households opened at least one account, and 50% opened two. Very few households (only 5%) opened joint accounts.

While the majority opened accounts, average usage was fairly modest. Only 44% of those sampled for an account (64% of those who opened one) ever used their account, that is, made at least one transaction on the account. This pattern is shown in a histogram of the total

¹³In the survey, transfers included cash transfers as well as an estimate of the cash value of any in-kind transfers.

number of deposits in Figure 1, Panel A. Over half of the sample never used the accounts and many of those who did use the accounts used them only infrequently. Over the 2.5 years we monitored account usage, 28% made two or more transactions in the account. Our preferred measure of “active” use is making at least 5 transactions over this time period – 15% qualify as active users.¹⁴

While most people did not use the accounts much, the sums transacted by the 15% of active users was large. Since the banks were located in market centers which people may not visit daily, people seemed to use the accounts for infrequent but large transactions: in the overall sample, the average deposit was \$9 and the average withdrawal \$22 (these are equivalent, respectively, to 14% and 36% of total monthly expenditures). Among active users, the mean number of deposits and withdrawals was 9 and 5.5; since the transactions were large, the mean (median) total value of deposits and withdrawals was \$224 (\$44) and \$175 (\$32), respectively. These are large sums compared to \$60 monthly expenditures. Note also that the total withdrawn roughly matches the total deposited, consistent with people saving up smaller sums for relatively short- or medium-term purposes (such as dealing with emergencies), rather than longer-term goals which might have taken several years to reach (such as buying land).

Table 4 regresses four measures of take-up (ever used the account, active use of the account (i.e. at least 5 transactions), and the total amount deposited and withdrawn over the study period) on the treatment type. Specifically, we estimate

$$Y_{hv} = a * M_h + b * B_h + c * SF_h + \mathbf{X}'_{h1}\gamma + \theta_v + \varepsilon_{hv} \quad (1)$$

where X_{h1} is a vector of baseline characteristics including demographics, employment, asset ownerships, baseline savings methods, and related variables. θ_v is a market center fixed effect, which we include (and show in Table A3) because the quality of bank services differed across branches. In particular, service was lower quality in market centers B and C (see Dupas et al. 2012 for more details). M_h is a dummy equal to 1 if only the male head in household h was sampled for a bank account, B_h is a dummy equal to 1 if both heads in dual-headed household h were sampled for a bank account, and finally SF_h is a dummy equal to 1 if single-female household h was sampled for a bank account. The omitted group is those households where only the female head was sampled for a bank account. In this specification, a unitary household will save similarly in the three treatment configurations (the male receiving the account only, the female only, or both spouses), so that a test of the

¹⁴See Table 3 in Prina (2015) for a comparison of take-up and usage rates across a range of recent savings studies.

unitary model is whether $a = b = 0$.¹⁵

We find evidence that usage was higher in households where the husband got the account. While account opening and an indicator for active usage did not differ, households in which only the male got the account had 68% higher deposits and 100% higher withdrawals than dual-headed households in which only the wife received the account (point estimates for both spouses getting the account is also positive but statistically insignificant). This finding is consistent with the fact that so few households chose to open joint accounts, as well as with the results in Schaner (2015), who finds that incentives to save on individual accounts have very different impacts than incentives to save on joint accounts. Like us, she also finds that men use the accounts more and are more responsive to incentives.

Turning to the covariates that appear to correlate with account usage, we find that households with members self-employed outside of farming save more.¹⁶ In addition, take-up is higher among those with higher baseline asset levels. In addition to these factors, men who have more schooling and who were not members of a ROSCA at baseline are also associated with higher usage in terms of the amounts deposited and withdrawn. Finally, take-up and usage are considerably lower (in fact, usage is close to zero) in market centers B and C.

After observing usage for a period of about 9 months, it was apparent that usage was fairly limited. To better understand reasons for low usage, we conducted a semi-structured survey to half of the sample in January-February 2011.¹⁷ The results, which are reported in Dupas et al. (2012), suggest that poor service and high fees were primary reasons for low usage, in particular in market centers B and C.

4.2 Direct Impacts of Accounts on Treatment Households

For the remainder of this section, we turn to estimating the direct effects of the savings accounts on savings behavior and other downstream outcomes, by comparing treatment households to control households. For each outcome, we run two sets of regressions. In Panel A of each table, we estimate the intention-to-treat (ITT) effects allowing for heterogeneity

¹⁵This would not be true if the two spouses had different costs of banking (e.g. the male head travels to the market center more often) and we had not given households the opportunity to open joint accounts (since an account for the female would involve higher travel costs, at least for withdrawals which would have to be made by the account holder). Since we allowed individuals to add their spouse as joint owner at no cost, this is not an issue and the test is valid (as mentioned above, adding a joint owner was very uncommon, occurring just 5% of the time).

¹⁶This result helps to reconcile somewhat the findings with Dupas and Robinson (2013a), who find higher take-up than we do here among a sample of self-employed market vendors.

¹⁷In the impact analysis we control for whether the household was sampled for this survey, in case the survey itself affected behavior.

by household type (dual or single-headed):

$$Y_{hvt} = a * T_h * D_h + b * T_h * SF_h + d * SF_h + \mu Y_{hv1} + \mathbf{X}'_{h1} \gamma + \delta_t + \theta_v + \varepsilon_{hvt} \quad (2)$$

where Y_{hvt} is the outcome of interest for household h in village v as observed in round t , \mathbf{X}_{h1} is a vector of baseline characteristics (in particular, household type), δ_t is a round fixed effect, θ_v is a market center fixed effect and ε_{hvt} is the error term. T_h is a treatment indicator, D_h is an indicator for a dual-headed household, and SF_h is an indicator for being a single female household. To further improve precision we include the pre-treatment mean of the dependent variable Y_{hv1} (and therefore perform ANCOVA regressions).

In Panel B, we exploit the full experimental design and allow for the treatment effect to also vary among dual-headed households depending on who got treated:

$$Y_{hvt} = a * F_h + b * M_h + c * B_h + d * T_h * SF_h + e * SF_h + \mu Y_{hv1} + \mathbf{X}'_{h1} \gamma + \delta_t + \theta_v + \varepsilon_{hvt} \quad (3)$$

We present at the bottom of the tables p-values for joint significance, joint equality, and for each pair-wise test of equality. Besides testing whether the treatments had an effect, our main tests of interests here are whether $a = b$ and whether $a = c$ (in other words, whether giving an account to the female or the male head or both matters, in dual-headed households).

In both Panels, we restrict regressions to $t \geq 3$ (with round 1 included as control). We do not include round 2 data because that round occurred too soon after the savings account offer for impacts to yet be felt on most outcomes. Results for most outcomes look similar with this round added, however.

4.2.1 Impact of savings accounts on bank usage

Table 5 examines the effect of the account on bank savings and other forms of savings, and shows three main results. First, we find a significant effect of the account treatment on bank usage. Dual-headed treatment households are 50 percentage points more likely to report having a bank account, 7 percentage points more likely to report making a bank deposit and 4 percentage points more likely to report making a bank withdrawal in the past 30 days.¹⁸ For single female-headed households, effects are similar though somewhat smaller in magnitude. Second, we find no evidence that informal savings were crowded out. We find small increases in ROSCA deposits and small decreases in home savings (of magnitudes

¹⁸We consider indicators, rather than amounts deposited or withdrawn, because the vast majority of observations are censored at zero.

roughly canceling each other out), but both are far from significant. This result is suggestive that the bank savings were new savings and thus represented an increase in total financial savings.¹⁹

Turning to Panel B, we observe savings impacts for each of the sub-treatments. All treatments are associated with statistically significant increases in bank account ownership, deposits, and withdrawals. Consistent with the fact that few accounts were opened jointly, we observe larger effects on reported account ownership when both spouses were offered an account. There is no evidence of differential crowd-out behavior across treatment arms. Finally, and reassuringly, we find no savings impacts in placebo tests run on round 1 data only (Table WA1 in the Web Appendix). As discussed above, this suggests that differential attrition is unlikely to be driving the results.

4.2.2 Impact of savings account on downstream outcomes

Table 6 turns to estimating the effects of the accounts on downstream outcomes. There are two important difficulties to estimating effects here. First, as noted above, power is limited by the fact that only about 15% of households used the accounts actively. Second, the accounts were not geared for a particular purpose, and people had a number of different savings goals. Appendix Table A3 tabulates savings goals (these were collected in early 2011 and so therefore are potentially endogenous to treatment and are therefore presented only for descriptive purposes). These responses are at the individual respondent level. Of those with goals (90% of the sample), 43% list school fees as one of their goals, 41% list business investment, 36% agriculture/livestock, 27% home improvement, 12% buying land, 11% emergencies, 3% health care, and 7% other goals. This heterogeneity makes it hard to find effects on any one outcome, as compared to previous papers such as Dupas and Robinson (2013a) which included only self-employed people primarily saving for business expenses, or Dupas and Robinson (2013b) which was focused exclusively on items for health.

As might be expected given this, the overall pattern of results is fairly modest. For both dual- and single-headed households, most effects are positive but few are significant. The one exception is food security: dual-headed treatment households are 13 percentage points less likely to report not having enough food at some point in the previous 6 months (on a control base of 76%). While the decline for single-headed treatment households is smaller

¹⁹Note, however, that our power to pick up this sort of crowding out is limited, since treatment effects are driven by a small number of active users so that mean treatment effects are small. To see this, note that the mean amount saved at home in the control group is \$14 over 30 days while the average amount contributed to a ROSCA is \$7.16 per month, for a total of about \$21 per month. The total amount saved in the accounts was \$34 over 28 months, or about \$1.20 per month. Thus, at the mean, bank savings was just over 5% of total savings.

(5 percentage points) and not significant, these households do report skipping meals on 2.4 fewer days in the past month (on a base of 8.6 days). As with the savings results, Panel B shows no obvious differential patterns by subtreatments.²⁰

5 Effects on inter-personal financial linkages

The main focus of this paper is on resource allocation across and within households when access to formal savings devices increases. To the extent that there is limited commitment or hidden information across households, increased access to formal savings may undermine informal insurance arrangements. Similarly, if household behavior can be described by a unitary model then we should find no differences in outcomes such as intra-household transfers and private expenditures across treatment arms. However, if the unitary model is not the appropriate benchmark, for example because spouses have different discount factors (Schaner 2015), gaining access to a savings account may enable household members to shield resources from other family members. We take up these issues in turn below.

5.1 Inter-household Transfers

How do own-treatment effects spill over?

Table 7 uses the same econometric specifications as in Tables 4 and 5 to estimate the intent-to-treat effects on inter-household transfers. Recall from Section 3.4.1 that transfers from different partners serve different purposes – transfers from grown children and siblings are essentially one-sided support payments, while transfers from neighbors and friends appear to serve more of a give-and-take role. We present results on these two types of transfers separately, and find differing impacts. We present results on both the prevalence of transfers of each type, and their size, noting that our transfer amounts data is fairly noisy, and still exhibits very large standard deviations despite winsorizing at the 99th percentile.

We find a 9 percentage point drop in the incidence of remittance-type transfers among dual-headed households offered an account (Table 6, Panel A, column 2; p-value: 0.051). This represents a 13% reduction in this type of transfer, off of a base of 71 percent. We also see a decrease in the amount received of around the same magnitude (-\$2, on a base of about \$20) but it is very imprecisely estimated. In contrast, transfers to these far away, better off relatives are unaffected. Thus, in net, transfers received from remittance-type of partners fell. The specification in Panel B shows that this effect is strongest when the male

²⁰Unfortunately, we did not ask questions about food security in round 1 of the survey so we cannot run a placebo test for this outcome.

head was offered an account. In fact, we cannot reject the null of no effect when only the wife was offered an account (Panel B). We also find no effect for single female households.

The results for the second type of transfers, those to friends and neighbors within the village, are different. We observe that these types of transfers, which we characterized above as more of the give-and-take type, actually go up in response to the treatment. The incidence of transfers sent to others in the village increases by a statistically significant 12 percentage points off of a base of 38%, thus a fairly large increase in percentage terms (Table 6 column 7). Here again, the increase in amount sent is of similar magnitude (around 21%) but imprecisely estimated (column 8). Transfers received do not go up (columns 5 and 6), and so overall treated households increased their net contribution to this type of financial partner. To the extent that the treatment increased households income, this result is consistent with some level of income pooling at the risk-sharing network level. Here again, the effects are found only for dual-headed households, consistent with the fact that the direct effects of the account offer were much more pronounced for them.

Peer effects

The analysis in Table 7 tells us whether getting an account affects how much the recipient household transfers out or receive. In this subsection we instead look at whether having more financial partners who received an account affected own outcomes, controlling for own treatment status. To do this, we use the information we have on financial relationships from the first survey wave. We asked respondents to list all the gifts and loans they either received from or made to friends or relatives in the 90 days preceding the survey, and asked them for the names of the sender/receiver and whether that financial partner was from within or outside the village. Using a fuzzy name matching algorithm, we were able to match 47% of named contacts from within the village with our sample list, meaning that we know the treatment status of the partner for 47% of reported transactions with local partners. There is almost certainly measurement error in this matching, which will attenuate effects towards zero.²¹

With this data, we estimate the following equation for several outcomes Y_{hvt} :

$$Y_{hvt} = a * C_h + b * CM_h + c * MT_h * + \mu Y_{hv1} + \mathbf{X}'_{h1} \gamma + \delta_t + \theta_v + \varepsilon_{hvt} \quad (4)$$

²¹There are several reasons why this percentage would not be 100% even with no measurement error. First, people may have had contacts who had accounts at baseline and who were excluded from the sample. As mentioned previously, even though this is a small proportion of the sample, better-off individuals may disproportionately be supporting others. Second, the borders of our censusing activity were essentially arbitrary – people may have thought that a person living close to them but just outside our catchment area would qualify as “in the village” even though we wouldn’t have data on them.

where C_h is the total number of transfers (whether in or out) reported by household h , CM_h is the total number of transfers with a partner that can be matched, and MT_h is the total number of matched transfers with a partner in the treatment group. The randomization should ensure that, conditional on CM_h , MT_h is random. We also control for the total number of transfers C_h because households with more unmatched contacts may differ from other households. We include respondent treatment status in the vector of controls \mathbf{X}_{h1} .

We show the results on transfers in Table 8. The estimates of the peer effects are shown in row 3. We find no evidence of negative spillovers in terms of transfers. Interestingly, we find no positive spillover either – having more transactions with baseline partners sampled for an account does not increase transfers in, even though in Table 7 (and again in Table 8, row 4, Column 7) we saw that households in the treatment group report sending more to others. There are two possible explanations for this apparently inconsistent result. One is that treated households *expanded* the set of households in their financial network. This would be consistent with the findings of Comola and Prina (2014), who exploit a randomized savings account intervention that mimicked ours but in a different context (Nepal). An alternative explanation is that measurement error (due to our imperfect matching) downwardly biases the spillover analysis.

To complement the transfer results, columns 9-11 of Table 8 look at other outcomes, namely food security and reported reliance on contacts for emergencies. Again, we find no evidence of negative spillovers of having baseline partners sampled for an account.²²

Benchmarking effect sizes

We find statistically significant results for some inter-household transfers even though active usage was limited to 15% of households. Results therefore must be driven by the small number of people who used the accounts actively. What does this imply about the implied treatment effects for them? The key outcomes we find are both among dual-headed households: a 9 percentage point reduction in receiving a remittance-type transfer and a 12 percentage point increase in give-and-take transfers. Given a take-up rate of around 15%, these effects imply that for active users, the incidence of transfers from children and sibling dropped by 60% and transfers to friends and neighbors increased by 80%. The results therefore suggest quite large effects for a small subset of individuals.

²²We note that the estimate of own treatment effects are unaffected when controlling for spillover effects (that is, the coefficient estimates shown in rows 4-5 of Table 8 are similar to those shown in Table 7). The results are also unlikely to be driven by differential attrition as we see no effect in the placebo tests on round 1 data for the post-attrition sample (see Web Appendix Table A4).

5.2 Intra-household outcomes

As described in Section 4.1, we find that bank usage is higher among married households in which the male head received an account than among those in which only the female head got an account. This suggests a rejection of the unitary household model. While account usage differs, what effect does this have on other outcomes? Did the treatments, by changing the autarkic outcome for the spouse(s) who received an account, affect how resources are allocated within the household?

To answer these questions, we restrict the sample to dual-headed households, and estimate a version of equation 3 (without the single female head treatment) for savings outcomes (Table 9) and other outcomes including between-spouse transfers, expenditures, and income (Table 10). Consistent with results discussed previously, Table 8 shows that usage is much higher in accounts in a respondent's own name. For example, women are 43-47 percentage points more likely to report having an account when offered one in their own name, but no more likely when their husband is offered an account. Point estimates for deposits and withdrawals are only positive for women when they are offered an account directly. The picture is similar for men, though here we observe some spillover effects from wives' accounts. Men are 43-51 percentage points more likely to report having an account when it is in their name, but 11 percentage points when it was offered to their wife (significant at 10%). Similarly, dummies for making withdrawals and deposits are only statistically significant for treatments in which the husband got the account directly. We do, however, observe a statistically significant increase in reported withdrawals for all three treatment arms, including the one where the wife alone got the account. The pattern for men is one in which usage is much higher in his own account, but in which there may be some usage of the spouse's account. This is also consistent that the few accounts that were opened jointly were predominantly in cases in which the wife was offered an account and added the husband to the account (households opened joint accounts 7% of the time when only the wife was offered the account, compared to 2% of the time when only the husband was).

Results for other outcomes are presented in Table 10. Interestingly, we find no effect of the treatments on these outcomes. Transfers between spouses appear to be unrelated to access to the free accounts, and not affected by whether the male head received the account or not. Similarly, neither private nor public expenditures appear to be affected differentially by treatment status. From these, we conclude that despite the differences in take-up and usage in dual-headed households where men were offered accounts compared to those in which only women received the accounts, there was no negative spillover onto spouses, and more generally it seems that none of the treatments affected intra-household dynamics, at least in what we measured.

6 Discussion

In many developing countries, access to banks is expanding rapidly (see Allen et al. 2013 on the recent massive expansion of private banks like Equity Bank in Kenya). What effect does this expansion have on the financial interrelationships that predated the entry of these institutions? Do these new opportunities crowd out insurance by allowing people to opt out of risk-sharing networks? Or are the gains from access shared through social networks?

We investigate this question in the context of a field experiment that provided bank accounts to a random subset of households in rural Kenya. The households in our study tend to be dependent on relatives who live far away, but are linked in more of a give-and-take relationship with friends and neighbors in the village. We find that the accounts allowed households to rely upon far-away relatives less regularly, but to send more within the village. Both results constitute positive spillovers, suggesting that the benefits of financial inclusion can accrue beyond previously unbanked households alone. In particular, expanding access in rural areas can have positive spillover effects even in urban areas for households that already had ready access to banking options.

On the other hand, the results we document are generated from a small fraction of the target population (specifically the 15% of people who actively used the accounts). While 15% active usage is not out of line with take-up observed in other contexts (see Table 3 in Prina 2014), it is significantly smaller than what was observed in a previous study with a similar village bank, also in Kenya (Dupas and Robinson 2013a). Mean deposits were \$4.66 per month in that earlier study, compared to \$1.10 per month in the present one. What accounts for much lower usage this time around? The two key differences are that the banks and the study populations differ. First, the bank branches in this study suffered from trust and service problems. Second, the sample in this paper is representative of unbanked households without a female head, whereas the sample in the previous paper was composed primarily of market vendors and bike taxis, and the effects were concentrated among market vendors. Part of the explanation therefore could simply be that market vendors are better able to save than people in other occupations such as farmers. Indeed, in the present study we observe that market vendors are somewhat better off and, as shown in Table 4, are somewhat more likely to use the accounts. What's more, in a companion study conducted a few years later in Uganda and Malawi with a broad swath of unbanked households, we again find modest usage rates (Dupas et al., 2015). Does this mean that the majority of poor rural households do not need saving products because they are too poor to save? The present study allows us to explore this. After observing low take-up during the sample period, we randomly introduced another savings product: savings boxes similar to those in Dupas and

Robinson (2013b) and based on the lockboxes designed by Ashraf, Karlan and Yin (2006) but without the embedded commitment mechanism. The boxes were simple metal boxes with a deposit slit at the top. Respondents were also provided with a lock and key. Boxes were given out in October-November 2011, between our fifth and sixth (and last) round of surveying. Table A4 reports take-up statistics for this product. When we surveyed people for round 6, we asked to see their box and checked how much money was in it. We consider a household as having used the box if money was found in the box at that time: depending on whether we count people who did not have their box on them as missing observations or non-users, we find that 34-46% of people used the box. To compare with usage of the bank accounts, we asked people how much they had deposited since receiving the box (which was given out 8 months earlier). Since these are not transactions records but only self-reports, responses should be taken with a measure of caution. That said, self-reported usage was much higher than for the accounts: people reported depositing about \$23 on average, or about \$2.50 per month. This is 2.5 times as large as the average for the accounts, which was about \$1 per month. While these savings could have simply been shifting money kept at home in other sources into the box, we view this result as suggestive that households have some savings at home, but preferred not to put it into the account.²³

Thus while we find statistically significant and economically meaningful effects on interpersonal linkages, effects are greatly attenuated by the simple fact that the relatively poor quality of the savings product being offered resulted in low take-up. What effect would there be of a better tailored product? Network effects we observe may well scale-up – or not. Indeed, it could be that network effects are non-linear in the share of the network that has access to formal accounts. This is an important question left for future work.

²³A natural question is whether the boxes affected transfers or other outcomes. Unfortunately, with only 1 round of post-lockbox data, we lack the power to explore this.

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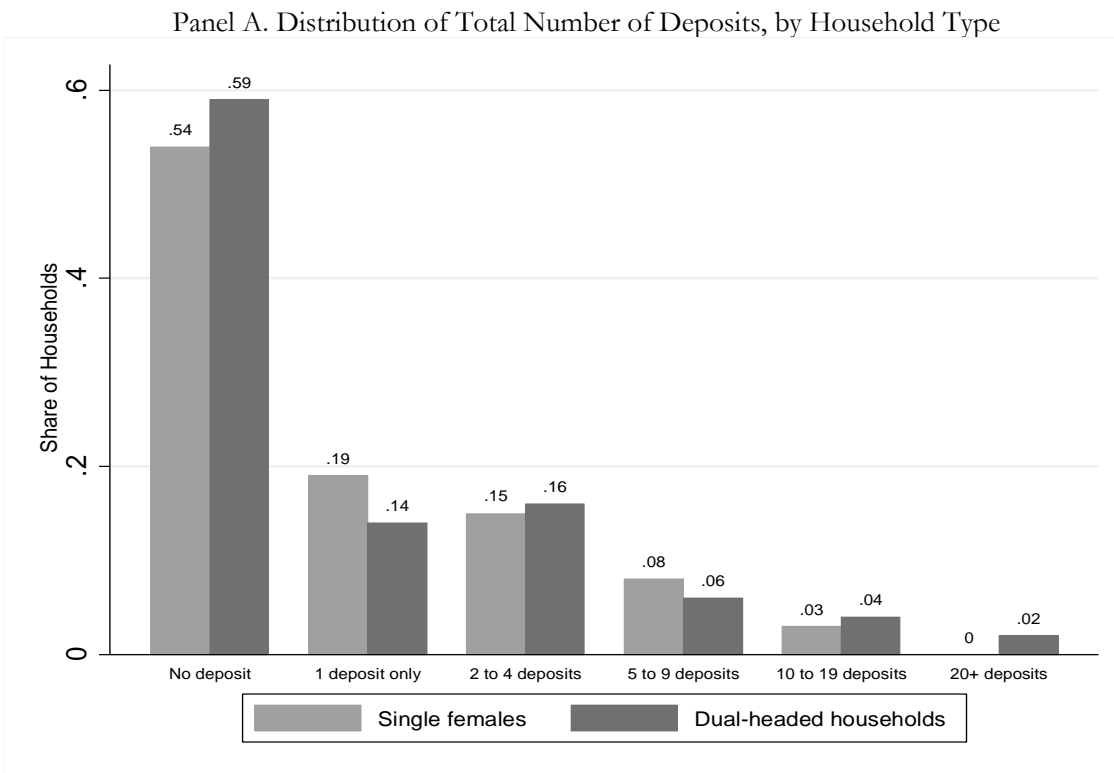
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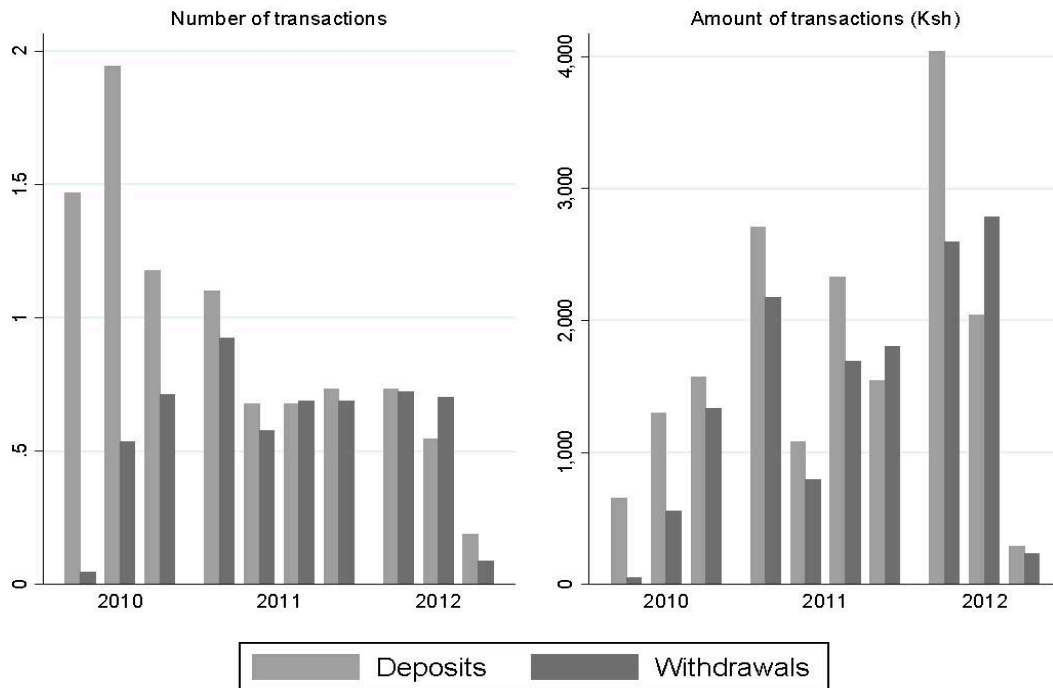
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Figure 1. Sponsored Account usage



Panel B. Quarterly transactions among "active users" (at least 5 transactions), by year



Notes: Data source: Administrative data obtained from banks

Table 1. Sample Characteristics and Balance Check

	(1)	(2)	(3)	(4)
	Dual-headed households		Single Female Households	
	Mean [Std. Dev.]	Joint Test: All Account Treatments = 0	Mean (Std. Dev.)	Joint Test: Account Treatment = 0
Age of female head	34.82 [13.91]	1.15 {0.33}	49.50 [16.93]	0.17 {0.68}
Years of education of female head	5.89 [3.14]	0.21 {0.89}	4.03 [3.43]	0.01 {0.91}
Female head is literate (can write in Swahili)	0.69 [0.46]	0.06 {0.98}	0.43 [0.5]	0.00 {0.98}
Age of male head	41.18 [15.44]	0.96 {0.41}		
Years of education of male head	7.11 [3.02]	0.32 {0.81}		
Male head is literate (can write in Swahili)	0.90 [0.31]	0.58 {0.63}		
Household size	5.62 [2.21]	0.37 {0.77}	4.51 [2.39]	2.85 {0.09*}
Home has iron roof	0.37 [0.48]	0.65 {0.59}	0.56 [0.5]	0.02 {0.9}
Home has cement floor	0.09 [0.29]	0.43 {0.73}	0.16 [0.37]	0.03 {0.87}
Value of durable goods and animals owned (USD)	275 [296]	0.91 {0.43}	191 [259]	0.01 {0.93}
Acres of land owned	1.90 [1.99]	0.65 {0.58}	1.73 [1.78]	2.74 {0.1*}
Earn income from casual work	0.57 [0.5]	0.46 {0.71}	0.27 [0.44]	0.35 {0.56}
Earn income from sale of farm production	0.41 [0.49]	0.41 {0.75}	0.26 [0.44]	0.10 {0.75}
Earn income from business (e.g. market vending)	0.36 [0.48]	0.70 {0.56}	0.19 [0.39]	0.10 {0.76}
Total income earned in last 30 days (USD) ¹	27 [47]	0.87 {0.45}	7.32 [27]	1.76 {0.19}
Owns mobile phone	0.50 [0.5]	1.92 {0.13}	0.27 [0.44]	0.12 {0.73}
Has a mobile money account	0.30 [0.46]	0.87 {0.45}	0.08 [0.28]	0.72 {0.4}
Female head participates in a ROSCA	0.54 [0.5]	0.61 {0.61}	0.42 [0.49]	0.28 {0.59}
Male head participates in a ROSCA	0.34 [0.48]	0.38 {0.77}	0.00	0.00
<i>Where would you find money if you needed 1,000Ksh urgently?</i>				
Female head: would borrow from friend or relative	0.51 [0.5]	1.15 {0.33}	0.39 [0.49]	0.15 {0.7}
Female head: would sell agricultural production	0.17 [0.37]	0.58 {0.63}	0.20 [0.4]	0.04 {0.84}
Female head: would be able to rely on savings only	0.03 [0.18]	1.18 {0.32}	0.01 [0.07]	0.00 {0.99}
Male head: would borrow from friend or relative	0.46 [0.5]	2.74 {0.04**}		
Male head: would sell agricultural production	0.18 [0.39]	0.15 {0.93}		
Male head: would be able to rely on savings only	0.03 [0.17]	1.13 {0.34}		
Number of Observations	485		397	

Notes: Unit of observation is the household. Data from baseline (census) survey. Columns 2 and 4 shows F-statistics and {p-values} from a test of whether the treatment account coefficients are jointly equal to zero. ***, **, and * indicate significance at the 1, 5, and 10 percent levels respectively. Standard deviations are in brackets. Exchange rate at time of baseline survey (early 2010) was around 80 Ksh to US\$1.

¹Income includes cash income from work only and does not include farm income, transfers, or other flows.

Table 2. Summary statistics on transfers (averages totals, over 6 rounds)

	(1)	(2)	(3)
Panel A. Inter-Household Transfers			
	Total received	Total sent	Ratio
Total (USD)	112.07 (144.15)	31.41 (51.60)	3.57
<i>By partner type</i>			
Child	44.86 (115.63)	3.38 (15.64)	13.26
Sibling	29.32 (56.76)	6.38 (14.43)	4.60
Other relative	14.33 (35.12)	3.55 (11.30)	4.04
Friend	11.93 (27.12)	5.66 (15.36)	2.11
Parent	4.85 (17.19)	8.29 (19.32)	0.58
Neighbor	2.92 (7.31)	2.75 (6.76)	1.06
Other	2.31 (12.51)	0.15 (1.45)	15.79
<i>By location of partner</i>			
Outside village	89.59 (134.84)	15.80 (28.65)	5.67
Within village	20.40 (25.88)	14.37 (24.40)	1.42
Number of households	885		
Panel B. Intra-Household Transfers and Allocations (dual-headed households only)			
	Male Head	Female Head	
<i>Transfers (past 30 days)</i>			
Gave transfer to spouse	0.82 (0.39)	0.28 (0.45)	
Amount of transfers	10.67 (14.29)	1.13 (4.41)	
<i>Income (past 30 days)</i>			
Total income	22.28 (38.37)	13.20 (26.35)	
<i>Expenditures (past 30 days)</i>			
Total	37.09 (30.76)	20.70 (19.79)	
Personal	5.81 (6.48)	2.39 (3.94)	
Food	18.00 (14.85)	11.74 (12.13)	
Household expenses	4.09 (5.93)	3.05 (4.25)	
Items for children	12.69 (34.03)	6.27 (16.69)	
Number of households	485		

Notes: Std. Deviations in parentheses. All monetary values in US Dollars. Exchange rate averaged approximately 75 Ksh to \$1 USD during the sample period.

Table 3. Take-up and usage of savings account

	(1)	(2)
	Full sample	"Active" users (at least 5 transactions)
Took up an account	0.69	
If dual-headed household: took up joint account	0.05	
<i>If both heads sampled</i>		
Took up at least one account	0.81	
Only female took up account	0.14	
Only male took up account	0.17	
Both took up account	0.50	
Ever used at least one account	0.44	
<i>If both heads sampled</i>		
Ever used at least one account	0.50	
Only female used account	0.17	
Only male used account	0.16	
Both spouses used account	0.16	
Made at least 2 transactions	0.28	1.00
Made at least 5 transactions (= "active")	0.15	1.00
<i>If both heads sampled</i>		
Only female made at least 5 transactions	0.06	0.38
Only male made at least 5 transactions	0.07	0.46
Both spouses made at least 5 transactions	0.01	0.08
<i>Deposits</i>		
Total value of deposits (USD)	34.16 (205.24)	223.85 (496.88)
Total number of deposits	1.81 (4.15)	9.02 (7.19)
If ever deposited, average deposit size	9.06 (26.80)	21.73 (42.13)
<i>Withdrawals</i>		
Total value of withdrawals (USD)	26.36 (159.02)	175.44 (383.83)
Total number of withdrawals	0.86 (3.62)	5.50 (8.01)
If ever withdrew, average withdrawal size	21.98 (31.93)	25.71 (34.42)
<i>Balance</i>		
Balance after 9 months (USD)	4.15 (31.94)	23.65
Balance after 28 months (USD)	7.80 (81.29)	48.42
Number of households	600	88

Notes: Means presented, with standard deviations in parentheses. Sample restricted to households sampled for at least one sponsored account. Data is over the entire sample period (2.5 years). All data on account information come from administrative bank records. For households sampled for two sponsored accounts, the transactions are summed across the two accounts when two were opened and used. All monetary values in US Dollars. Exchange rate averaged approximately 75 Ksh to \$1 USD during the sample period. There is a Ksh100 (USD \$1.33) minimum balance requirement on the accounts.

Table 4. Determinants of savings account usage

	(1)	(2)	(3)	(4)
	Ever used at least one sponsored account	Had at least 5 transactions in sponsored account	Total deposits	Total withdrawals
<i>Treatment indicators</i>				
Single-headed household	0.05 (0.17)	-0.13 (0.13)	-24.75 (62.48)	-14.32 (53.41)
Male only sampled for account (a)	-0.10 (0.06)	-0.06 (0.05)	38.61 (22.57)*	44.66 (19.30)**
Both heads sampled for account (b)	0.07 (0.06)	-0.01 (0.04)	29.04 (20.94)	17.07 (17.91)
<i>Other covariates</i>				
Someone in household earns income from business (e.g. market vending)	-0.03 (0.04)	0.06 (0.03)*	31.63 (16.35)*	33.90 (13.98)**
Log value of animals + durables owned	0.05 (0.02)***	0.04 (0.02)***	7.47 (7.61)	6.31 (6.50)
Years of education of female head	0.01 (0.01)	0.00 (0.01)	2.10 (2.81)	2.78 (2.41)
Years of education of male head	0.00 (0.01)	0.00 (0.01)	5.24 (3.35)	5.76 (2.87)**
Household has mobile money account	0.06 (0.05)	0.05 (0.04)	15.85 (18.70)	7.60 (15.99)
Female head participates in a ROSCA	0.06 (0.04)	0.02 (0.03)	-4.04 (15.05)	-10.55 (12.87)
Male head participates in a ROSCA	-0.02 (0.05)	-0.03 (0.04)	-41.06 (19.22)**	-28.15 (16.43)*
Market B	-0.15 (0.05)***	-0.01 (0.04)	-45.55 (18.21)**	-39.51 (15.57)**
Market C	-0.39 (0.05)***	-0.16 (0.04)***	-51.01 (17.71)***	-41.38 (15.14)***
P-value a=b	0.003**	0.218	0.649	0.125
P-value a=b=0	0.013**	0.361	0.199	0.066*
Observations	600	600	600	600
Dep. Var. Mean for omitted category (dual headed, only female sampled)	0.59	0.20	58.16	47.76
Std. dev. for omitted category	0.49	0.40	250.35	215.12

Notes: Unit of observation is the household. Sample restricted to households sampled for at least one sponsored account. All data on account information come from administrative bank records. For households sampled for two sponsored accounts, the transactions are summed across the two accounts when two were opened and used. Monetary values are in USD.

Table 5. Impact of Savings Treatment on Saving Behavior

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	At least one spouse has a bank account	In the past 30 days:							
		Made a bank deposit	Bank deposits	Made a bank withdrawal	Bank withdrawals	Member of a ROSCA	Contributions to ROSCA	Saves money at home	Deposits to home savings
Panel A. Pooled									
Dual headed household * Sampled for account	0.51 (0.04)***	0.10 (0.02)***	3.92 (1.46)***	0.03 (0.01)***	1.81 (1.14)	0.03 (0.04)	0.63 (0.81)	0.00 (0.03)	0.67 (2.03)
Single headed * sampled for account	0.43 (0.03)***	0.06 (0.01)***	-0.12 (0.38)	0.02 (0.01)***	-0.28 (0.80)	-0.01 (0.03)	0.22 (0.45)	0.00 (0.03)	0.34 (0.84)
Single headed	-0.07 (0.04)*	-0.03 (0.02)	-0.87 (0.87)	-0.01 (0.01)	-0.83 (1.19)	-0.15 (0.05)***	-2.65 (0.78)***	-0.25 (0.04)***	-7.81 (1.91)***
Dep. Var. Mean (control, dual-headed hhs)	0.16	0.06	1.85	0.02	1.59	0.71	7.16	0.77	14.22
Dep. Var. SD (control, dual-headed hhs)	0.37	0.24	11.96	0.15	13.21	0.45	9.93	0.42	26.02
Observations	3208	3200	3200	3208	3208	3208	3202	3196	3196
# of IDs	885	885	885	885	885	885	885	885	885
Panel B. By treatment									
Dual headed household * male only sampled for account (a)	0.42 (0.05)***	0.08 (0.03)***	4.93 (2.71)*	0.04 (0.02)**	1.91 (1.51)	0.03 (0.05)	0.86 (0.96)	-0.03 (0.04)	1.18 (2.62)
Dual headed household * female only sampled for account (b)	0.48 (0.05)***	0.07 (0.02)***	1.54 (1.44)	0.02 (0.01)*	1.90 (1.60)	0.03 (0.05)	1.40 (1.08)	-0.01 (0.04)	2.94 (2.65)
Dual headed household * both spouses sampled for account (c)	0.59 (0.04)***	0.12 (0.02)***	5.07 (2.24)**	0.04 (0.02)**	1.68 (1.56)	0.02 (0.04)	-0.15 (0.89)	0.02 (0.03)	-1.47 (2.15)
Single headed * sampled for account (d)	0.43 (0.03)***	0.06 (0.01)***	-0.12 (0.38)	0.02 (0.01)***	-0.28 (0.80)	-0.01 (0.03)	0.22 (0.45)	0.00 (0.03)	0.34 (0.85)
Single headed	-0.07 (0.04)*	-0.03 (0.02)	-0.88 (0.87)	-0.01 (0.01)	-0.83 (1.19)	-0.15 (0.05)***	-2.65 (0.78)***	-0.25 (0.04)***	-7.81 (1.90)***
p-values:									
Joint significance a, b, and c = 0	<.001***	<.001***	0.06*	0.03*	0.46	0.91	0.34	0.37	0.24
a=b=c	<.001***	0.16	0.21	0.59	0.99	0.96	0.23	0.21	0.12
a=b	0.25	0.75	0.22	0.32	0.99	0.88	0.61	0.57	0.52
a=c	<.001***	0.18	0.97	0.74	0.90	0.78	0.23	0.09*	0.24
b=c	0.03*	0.07*	0.14	0.49	0.91	0.89	0.12	0.25	0.05*
d=0	<.001***	<.001***	0.75	0.01*	0.73	0.74	0.63	1.00	0.69
Observations	3208	3200	3200	3208	3208	3208	3202	3196	3196
# of IDs	885	885	885	885	885	885	885	885	885

Notes: All monetary amounts are winsorized at the 99th percentile. All values in US Dollars. All regressions control for pre-treatment mean of dependent variable. Data from rounds 3-6 only. Standard errors clustered at household level in parentheses. ***, **, and * indicate significance at 1%, 5%, and 10%.

Table 6. Impact of Savings Treatment on Downstream outcomes

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
	Farming	Non-farming			Food security		Expenditures				
	Total spent on farming inputs	Has a market business	Total business investment	Total income	Did not have enough food at least once (last 6 months)	Number of days reduced meals (last 30 days)	Total	Food	Personal	Household goods	Children
Panel A. Pooled											
Dual headed household * Sampled for account	1.54 (0.79)*	-0.01 (0.04)	0.13 (6.16)	3.60 (3.77)	-0.08 (0.05)	-1.05 (1.15)	3.59 (3.12)	1.31 (1.67)	1.48 (0.74)**	0.51 (0.71)	0.07 (0.23)
Single headed * sampled for account	-0.57 (0.48)	0.03 (0.03)	1.54 (2.94)	1.91 (2.11)	-0.01 (0.04)	-1.57 (0.97)	1.66 (1.98)	1.57 (0.93)*	0.20 (0.40)	-0.45 (0.46)	0.05 (0.12)
Single headed	-1.39 (0.77)*	-0.16 (0.04)***	-12.00 (5.76)**	-16.71 (3.62)***	-0.02 (0.06)	0.12 (1.27)	-21.68 (2.69)***	-11.17 (1.45)***	-3.36 (0.58)***	-3.09 (0.54)***	-0.77 (0.21)***
Dep. Var. Mean (control, dual-headed hhs)	4.92	0.43	23.12	34.70	0.76	8.61	56.64	29.05	8.00	7.06	1.17
Dep. Var. SD (control, dual-headed hhs)	7.46	0.50	69.00	45.67	0.43	9.45	36.72	19.55	8.13	7.61	3.97
Observations	1616	3208	3194	3208	778	777	3207	3206	3207	3206	3198
# of IDs	867	885	885	885	778	777	885	885	885	885	885
Panel B. By treatment											
Dual headed household * male only sampled for account (a)	1.21 (0.99)	0.04 (0.05)	0.77 (7.18)	8.24 (4.91)*	-0.10 (0.06)	-1.87 (1.40)	1.45 (3.55)	1.06 (1.90)	1.77 (0.86)**	-0.06 (0.77)	0.12 (0.27)
Dual headed household * female only sampled for account (b)	0.81 (0.92)	-0.02 (0.05)	2.85 (8.62)	4.37 (4.82)	-0.05 (0.06)	-0.59 (1.37)	7.71 (3.66)**	3.00 (1.88)	1.96 (0.88)**	1.40 (0.88)	0.13 (0.27)
Dual headed household * both spouses sampled for account (c)	2.37 (1.02)**	-0.03 (0.05)	-2.43 (6.39)	-0.31 (4.34)	-0.09 (0.06)	-0.83 (1.29)	1.45 (3.54)	-0.02 (1.75)	0.84 (0.82)	0.13 (0.80)	-0.02 (0.25)
Single headed * sampled for account (d)	-0.58 (0.48)	0.03 (0.03)	1.54 (2.94)	1.90 (2.11)	-0.01 (0.04)	-1.57 (0.97)	1.54 (1.98)	1.52 (0.93)	0.19 (0.40)	-0.48 (0.46)	0.05 (0.12)
Single headed	-1.41 (0.77)*	-0.16 (0.04)***	-11.99 (5.76)**	-16.74 (3.62)***	-0.02 (0.06)	0.13 (1.27)	-21.69 (2.70)***	-11.17 (1.45)***	-3.36 (0.58)***	-3.09 (0.54)***	-0.77 (0.21)***
p-values:											
Joint significance a, b, and c = 0	0.14	0.41	0.88	0.24	0.36	0.58	0.11	0.11	0.07*	0.24	0.82
a=b=c	0.29	0.24	0.72	0.18	0.66	0.57	0.09*	0.06*	0.23	0.14	0.65
a=b	0.67	0.17	0.79	0.45	0.39	0.32	0.06*	0.19	0.82	0.06*	0.99
a=c	0.28	0.12	0.58	0.07*	0.82	0.39	1.00	0.42	0.19	0.77	0.46
b=c	0.12	0.98	0.48	0.31	0.47	0.83	0.04*	0.02*	0.13	0.09*	0.45
d=0	0.23	0.34	0.60	0.37	0.84	0.1*	0.44	0.1*	0.63	0.30	0.69
Observations	1616	3208	3194	3208	778	777	3207	3206	3207	3206	3198
# of IDs	867	885	885	885	778	777	885	885	885	885	885

Notes: All monetary amounts are winsorized at the 99th percentile. All values in US Dollars. All regressions control for pre-treatment mean of dependent variable. Data from rounds 3-6 only. Standard errors clustered at household level in parentheses. ***, **, and * indicate significance at 1%, 5%, and 10%.

Table 7. Impact of savings account on inter-household transfers

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Remittance type of partnership				Give-and-Take type of partnership			
	Received transfer	Amount received	Gave transfer	Amount given	Received transfer	Amount received	Gave transfer	Amount given
Panel A. Pooled								
Dual headed household * Sampled for account	-0.09 (0.04)**	-2.16 (3.04)	0.02 (0.03)	0.26 (0.59)	0.02 (0.04)	0.55 (0.89)	0.08 (0.04)**	0.90 (0.81)
Single headed * sampled for account	0.03 (0.03)	-0.47 (2.01)	0.00 (0.02)	-0.09 (0.32)	-0.02 (0.02)	0.03 (0.29)	-0.02 (0.03)	0.03 (0.32)
Single headed	-0.15 (0.04)***	-6.15 (3.20)*	-0.15 (0.03)***	-1.58 (0.57)***	-0.13 (0.04)***	-3.00 (0.79)***	-0.16 (0.04)***	-1.71 (0.76)**
Dep. Var. Mean (control, dual-headed hhs)	0.71	20.35	0.31	2.80	0.38	4.45	0.38	3.84
Dep. Var. SD (control, dual-headed hhs)	0.45	35.99	0.46	8.55	0.49	12.00	0.49	9.90
Observations	3216	3216	3216	3216	3216	3216	3216	3216
# of IDs	887	887	887	887	887	887	887	887
Panel B. By treatment								
Dual headed household * male only sampled for account (a)	-0.12 (0.04)***	-6.39 (3.35)*	0.01 (0.04)	0.28 (0.77)	0.03 (0.05)	-0.36 (0.97)	0.09 (0.05)**	1.27 (1.02)
Dual headed household * female only sampled for account (b)	-0.06 (0.04)	0.14 (3.93)	0.02 (0.04)	-0.11 (0.66)	-0.01 (0.05)	1.13 (1.26)	0.07 (0.04)*	0.10 (0.92)
Dual headed household * both spouses sampled for account (c)	-0.09 (0.04)**	-0.94 (3.40)	0.03 (0.03)	0.55 (0.70)	0.03 (0.04)	0.76 (1.01)	0.09 (0.04)**	1.24 (0.91)
Single headed * sampled for account (d)	0.03 (0.03)	-0.46 (2.01)	0.00 (0.02)	-0.09 (0.32)	-0.02 (0.02)	0.03 (0.29)	-0.02 (0.03)	0.03 (0.32)
Single headed	-0.15 (0.04)***	-6.15 (3.20)*	-0.15 (0.03)***	-1.59 (0.57)***	-0.13 (0.04)***	-3.00 (0.80)***	-0.16 (0.04)***	-1.71 (0.76)**
p-values:								
Joint significance a, b, and c = 0	0.04*	0.1*	0.87	0.72	0.63	0.46	0.16	0.30
a=b=c	0.39	0.07*	0.85	0.54	0.46	0.30	0.91	0.26
a=b	0.17	0.06*	0.74	0.57	0.29	0.20	0.69	0.20
a=c	0.55	0.05*	0.57	0.71	0.96	0.20	0.95	0.97
b=c	0.37	0.76	0.83	0.28	0.27	0.76	0.72	0.14
d=0	0.29	0.82	0.99	0.78	0.43	0.93	0.44	0.93
Observations	3216	3216	3216	3216	3216	3216	3216	3216
# of IDs	887	887	887	887	887	887	887	887

Notes: All monetary amounts are winsorized at the 99th percentile. All values in US Dollars. All regressions control for pre-treatment mean of dependent variable. Data from rounds 3-6 only. Standard errors clustered at household level in parentheses. ***, **, and * indicate significance at 1%, 5%, and 10%.

Rremittance-type partnerships are those with grown children, siblings, other relatives and others (all relationships with a in/out ratio above the mean, see Table 2). Give-and-Take partnerships are with friends, neighbors and parents.

Table 8. Spillover effects

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
	One-sided (remittance) type of partnership				Give-and-Take type of partnership				Round 6 Outcomes		
	Received transfer	Amount received	Gave transfer	Amount given	Received transfer	Amount received	Gave transfer	Amount given	Would rely on friend/neighbor if needed money urgently	Did not have enough food at least once (last 6 months)	Number of days reduced meals (last 30 days)
Num. of transfers listed in round 1	-0.01 (0.00)***	-0.40 (0.31)	0.00 (0.00)	-0.01 (0.07)	0.01 (0.00)**	0.22 (0.16)	0.01 (0.00)	-0.13 (0.10)	0.00 (0.01)	0.00 (0.01)	0.33 (0.16)**
Num. of round 1 transfers with partner matched to sample list	0.02 (0.01)**	0.46 (0.85)	0.01 (0.01)	0.16 (0.14)	0.01 (0.01)	0.07 (0.35)	0.01 (0.01)	0.42 (0.22)*	0.01 (0.02)	0.00 (0.02)	-0.02 (0.38)
Num. of round 1 transfers with partner matched and <i>sampled for account</i>	-0.01 (0.01)	-0.06 (1.17)	0.00 (0.01)	0.07 (0.28)	-0.01 (0.02)	0.07 (0.43)	0.00 (0.02)	0.23 (0.37)	-0.02 (0.03)	-0.01 (0.03)	-0.85 (0.56)
Dual headed household * Sampled for account	-0.09 (0.04)**	-1.16 (2.61)	0.01 (0.03)	0.30 (0.60)	0.02 (0.04)	0.44 (0.84)	0.08 (0.04)**	0.99 (0.78)	-0.11 (0.06)*	-0.12 (0.06)**	-1.58 (1.17)
Single headed * sampled for account	0.03 (0.03)	-0.52 (1.97)	0.00 (0.02)	-0.09 (0.32)	-0.02 (0.02)	-0.01 (0.29)	-0.02 (0.02)	0.02 (0.32)	-0.03 (0.05)	-0.02 (0.05)	-1.80 (1.02)*
Single headed	-0.17 (0.04)***	-4.59 (3.01)	-0.12 (0.03)***	-1.38 (0.60)**	-0.10 (0.04)**	-1.91 (0.80)**	-0.08 (0.04)**	-1.54 (0.74)**	-0.05 (0.07)	-0.05 (0.06)	0.29 (1.38)
Dep. Var. Mean (control, dual-headed hhs)	0.64	18.54	0.32	3.07	0.40	4.89	0.45	4.51	0.50	0.66	7.47
Dep. Var. SD (control, dual-headed hhs)	0.48	37.42	0.47	8.91	0.49	14.66	0.50	10.80	0.50	0.47	9.71
Observations	3216	3216	3216	3216	3216	3216	3216	3216	782	778	777
# of IDs	887	887	887	887	887	887	887	887	782	778	777

Notes: All monetary amounts are winsorized at the 99th percentile. All monetary values in US Dollars. Regressions control for own treatment status, household type, and interactions between treatment status and household type. Data from rounds 3-6 only. Standard errors clustered at household level in parentheses. ***, **, and * indicate significance at 1%, 5%, and 10%.

Table 9. Intra-household impacts on savings

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	Female					Male				
	Reports having bank account	Made deposit	Amount	Made withdrawal	Amount	Reports having bank account	Made deposit	Amount	Made withdrawal	Amount
Male only sampled for account (a)	0.01 (0.03)	0.00 (0.02)	-0.10 (0.25)	0.00 (0.00)	0.07 (0.07)	0.43 (0.05)***	0.09 (0.03)***	5.27 (2.65)**	0.04 (0.02)***	1.95 (1.47)
Female only sampled for account (b)	0.49 (0.05)***	0.06 (0.02)***	0.26 (0.30)	0.03 (0.01)***	0.47 (0.21)**	0.11 (0.04)***	0.02 (0.02)	1.35 (1.66)	0.00 (0.01)	1.73 (1.66)
Both sampled for account (c)	0.45 (0.04)***	0.05 (0.02)***	0.67 (0.54)	0.02 (0.01)***	0.99 (0.64)	0.51 (0.04)***	0.09 (0.02)***	4.64 (2.27)**	0.01 (0.01)	0.98 (1.51)
p-values:										
Joint significance a, b, and c = 0	<.001***	<.001***	0.23	<.001***	0.1*	<.001***	<.001***	0.07*	0.03*	0.53
a=b=c	<.001***	0.01*	0.12	<.001***	0.08*	<.001***	0.01*	0.17	0.02*	0.85
a=b	<.001***	0.01*	0.14	<.001***	0.07*	<.001***	0.02*	0.15	0.01*	0.91
a=c	<.001***	<.001***	0.11	0.01*	0.14	0.13	0.81	0.84	0.12	0.58
b=c	0.41	0.89	0.42	0.46	0.41	<.001***	<.001***	0.15	0.18	0.70
Dep. Var. Mean (control, dual-headed hhs)	0.06	0.03	0.38	0.00	0.00	0.13	0.04	1.58	0.02	1.66
Dep. Var. SD (control, dual-headed hhs)	0.24	0.16	3.78	0.00	0.00	0.33	0.20	11.78	0.15	13.48
Observations	1723	1710	1710	1723	1723	1679	1656	1656	1679	1679
# of IDs	486	486	486	486	486	474	474	474	474	474

Notes: All monetary amounts are winsorized at the 99th percentile. All values in US Dollars. All regressions control for pre-treatment mean of dependent variable. Data from rounds 3-6 only. Standard errors clustered at household level in parentheses. ***, **, and * indicate significance at 1%, 5%, and 10%.

Table 10. Intra-household impacts on downstream outcomes

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
	Transfers				Expenditures (male)					Expenditures (female)					Total income	
	From wife to husband	Amount	From husband to wife	Amount	Total	Personal	Food	HH expenses	Children	Total	Personal	Food	HH expenses	Children	Male	Female
Male only sampled for account (a)	-0.01	-0.17	-0.01	0.79	1.10	1.05	-0.36	0.39	-2.02	-2.03	0.13	-0.76	-0.28	-1.04	9.05	-1.15
	(0.04)	(0.31)	(0.04)	(1.26)	(2.78)	(0.67)	(1.36)	(0.58)	(2.70)	(1.56)	(0.34)	(1.05)	(0.32)	(1.40)	(4.29)**	(2.66)
Female only sampled for account (b)	-0.02	-0.20	-0.01	1.82	4.96	1.00	1.27	1.55	2.39	0.24	0.34	-0.70	0.22	0.85	4.32	-0.13
	(0.04)	(0.30)	(0.04)	(1.36)	(2.87)*	(0.64)	(1.40)	(0.70)**	(3.12)	(1.61)	(0.35)	(0.95)	(0.33)	(1.57)	(4.17)	(2.56)
Both sampled for account (c)	0.00	-0.33	0.01	0.67	0.54	-0.11	-0.69	0.56	1.38	-1.49	0.31	-1.48	-0.26	1.70	-1.27	0.42
	(0.04)	(0.31)	(0.04)	(1.19)	(2.52)	(0.55)	(1.26)	(0.58)	(2.84)	(1.46)	(0.30)	(0.92)	(0.28)	(1.48)	(3.61)	(2.45)
p-values:																
Joint significance a, b, and c = 0	0.98	0.71	0.86	0.59	0.32	0.11	0.34	0.17	0.33	0.32	0.71	0.41	0.31	0.22	0.04*	0.94
a=b=c	0.95	0.71	0.69	0.58	0.25	0.08*	0.19	0.23	0.18	0.26	0.78	0.52	0.20	0.11	0.02*	0.83
a=b	0.89	0.88	0.88	0.40	0.20	0.95	0.18	0.1*	0.1*	0.12	0.54	0.95	0.13	0.17	0.28	0.70
a=c	0.86	0.46	0.51	0.90	0.83	0.07*	0.76	0.76	0.15	0.68	0.53	0.40	0.93	0.04*	0.01*	0.55
b=c	0.75	0.50	0.44	0.32	0.11	0.06*	0.07*	0.15	0.72	0.20	0.94	0.29	0.1*	0.54	0.13	0.83
Dep. Var. Mean (control, dual-headed hhs)	0.28	1.13	0.82	10.67	37.09	5.81	18.00	4.09	12.69	20.70	2.39	11.74	3.05	6.27	22.28	13.20
Dep. Var. SD (control, dual-headed hhs)	0.45	4.41	0.39	14.29	30.76	6.48	14.85	5.93	34.03	19.79	3.94	12.13	4.25	16.69	38.37	26.35
Observations	1723	1723	1679	1679	1674	1674	1672	1672	1662	1720	1718	1719	1719	1710	1679	1723
# of IDs	486	486	474	474	474	474	474	474	474	486	486	486	486	485	474	486

Notes: All monetary amounts are winsorized at the 99th percentile. All values in US Dollars. All regressions control for pre-treatment mean of dependent variable. Data from rounds 3-6 only. Standard errors clustered at household level in parentheses. ***, **, and * indicate significance at 1%, 5%, and 10%.

Table A1. Experimental Design

	Only Female sampled for savings account	Only Male sampled for savings account	Both sampled for savings account	No one sampled for savings account	N
Single-Headed households	198 (49.6%)			201 (50.4%)	399
Dual-Headed households	127 (26.1%)	116 (23.9%)	161 (33.1%)	82 (16.9%)	486

Notes: Table shows count of number of households in each category, with percentage of the sample in parentheses.

Table A2. Attrition

	(1)	(2)	(3)	(4)	(5)
	Surveyed in Round 2	Surveyed in Round 3	Surveyed in Round 4	Surveyed in Round 5	Surveyed in Round 6
Panel A. Any Account (all households)					
Dual headed household * Sampled for account	-0.05 (0.03)	-0.01 (0.03)	-0.03 (0.03)	-0.07 (0.037)*	-0.07 (0.038)*
Single headed * sampled for account	0.00 (0.02)	0.00 (0.02)	0.00 (0.03)	0.02 (0.03)	0.05 (0.032)*
Single headed	0.00 (0.03)	0.03 (0.03)	0.05 (0.04)	-0.01 (0.04)	-0.05 (0.04)
Observations	885	885	885	885	885
Mean	1.00	0.94	0.94	0.91	0.89
Panel B. By account type (dual households only)					
Dual headed household * male only sampled for account (a)	-0.07 (0.038)*	-0.03 (0.04)	0.04 (0.05)	-0.08 (0.05)	-0.10 (0.048)**
Dual headed household * female only sampled for account (b)	-0.04 (0.04)	0.01 (0.04)	-0.04 (0.05)	-0.05 (0.05)	-0.09 (0.048)*
Dual headed household * both spouses sampled for account (c)	-0.03 (0.04)	0.01 (0.04)	-0.06 (0.04)	-0.07 (0.05)	-0.03 (0.05)
<i>p-values</i>					
p-value for joint significance	0.23	0.73	0.09*	0.38	0.07*
p-value for joint equality	0.30	0.53	0.05**	0.82	0.12
Observations	486	486	486	486	486
Mean	1.00	0.93	0.92	0.88	0.87

Notes: Unit of observation: household. All regressions control for market center.

Standard errors in parentheses. *, **, and *** indicate significance at 10%, 5%, and 1% respectively.

Table A3. Self-reported savings goals

	Mean
Has savings goal(s)	0.90
If yes, goal(s):	
School fee	0.43
Business investment	0.41
Agriculture/Livestock investment	0.36
Home improvement	0.27
Buy land	0.12
Emergency	0.11
Health care	0.03
Other	0.07
Number of individuals	703

Notes: Goals were collected in early 2011. Table is at the individual respondent level.

Table A4. Take-up and usage of savings box

	(1)	(3)	(4)	(5)
	Mean	Median	75th percentile	90th percentile
Box not available for spot check	0.40			
Found money in box at unannounced spot check ^a	0.34			
<i>If both heads sampled</i>				
Found money in box at unannounced spot check	0.46			
Only female had money in box	0.26			
Only male had money in box	0.07			
Both spouses had money in box	0.13			
<i>Balance</i>				
Balance after 9 months (self-reported)	5.16 (17.62)	0.00	2.67	10.67
Balance after 9 months (if box available for spot check)	3.08 (13.78)	0.00	0.93	6.27
<i>Deposits</i>				
Total value of deposits (self-reported)	23.21 (46.18)	6.67	26.67	57.33
Number of households	482			

Notes: Sample restricted to households sampled for at least one savings box. Data is over the 9 months after boxes were distributed. For households sampled for two boxes, the amounts are summed across the two boxes. All monetary values in US Dollars. Exchange rate averaged approximately 75 Ksh to \$1 USD during the sample period.

^aThis is **not** conditional on the box being available.

Web Appendix

The Effect of Savings Accounts on Interpersonal Financial Relationships: Evidence from a Field Experiment in Rural Kenya

Pascaline Dupas, Anthony Keats and Jonathan Robinson

Table WA1. Placebo test for Table 4: savings behavior

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	At least one spouse has a bank account	In the past 30 days:							
		Made a bank deposit	Bank deposits	Made a bank withdrawal	Bank withdrawals	Member of a ROSCA	Contributions to ROSCA	Saves money at home	Deposits to home savings
Panel A. Pooled									
Dual headed household * Sampled for account	0.03 (0.02)	0.03 (0.02)	2.08 (1.11)*	0.00 (0.01)	2.19 (2.40)	0.02 (0.06)	-0.12 (0.95)	-0.07 (0.06)	0.84 (1.97)
Single headed * sampled for account	0.00 (0.01)	0.01 (0.01)	0.15 (0.39)	0.00 (0.01)	-0.23 (0.79)	0.04 (0.05)	0.31 (0.46)	0.05 (0.05)	0.63 (0.86)
Single headed	-0.02 (0.02)	-0.02 (0.02)	-0.29 (0.63)	-0.01 (0.01)	-0.10 (1.06)	-0.24 (0.06)***	-3.60 (0.96)***	-0.37 (0.06)***	-7.22 (1.98)***
Dep. Var. Mean (control, dual-headed hhs)	0.04	0.01	0.19	0.01	0.61	0.62	4.81	0.61	7.87
Dep. Var. SD (control, dual-headed hhs)	0.19	0.11	1.68	0.11	5.52	0.49	7.78	0.49	15.80
Observations	873	841	841	873	873	873	840	840	840
# of IDs	873	841	841	873	873	873	840	840	840
Panel B. By treatment									
Dual headed household * male only sampled for account (a)	0.01 (0.03)	0.04 (0.02)*	4.05 (1.77)**	0.00 (0.01)	0.42 (3.54)	0.00 (0.07)	-0.37 (0.94)	-0.05 (0.07)	1.10 (2.07)
Dual headed household * female only sampled for account (b)	0.04 (0.03)	0.02 (0.02)	0.44 (1.73)	0.02 (0.01)	6.69 (3.49)*	0.03 (0.07)	-0.35 (0.92)	-0.04 (0.07)	0.21 (2.03)
Dual headed household * both spouses sampled for account (c)	0.03 (0.03)	0.03 (0.02)	2.00 (1.64)	-0.01 (0.01)	0.03 (3.31)	0.04 (0.07)	0.20 (0.87)	-0.11 (0.06)*	1.14 (1.93)
Single headed * sampled for account (d)	0.00 (0.02)	0.01 (0.02)	0.12 (1.26)	0.00 (0.01)	-0.22 (2.47)	0.04 (0.05)	0.31 (0.67)	0.05 (0.05)	0.63 (1.49)
Single headed	-0.02 (0.02)	-0.02 (0.02)	-0.26 (1.64)	-0.01 (0.01)	-0.08 (3.26)	-0.24 (0.06)***	-3.61 (0.87)***	-0.37 (0.06)***	-7.22 (1.92)***
p-values:									
Joint significance a, b, and c = 0	0.35	0.32	0.06*	0.1*	0.09*	0.87	0.86	0.28	0.90
a=b=c	0.41	0.52	0.07*	0.05*	0.05*	0.76	0.69	0.34	0.84
a=b	0.18	0.26	0.02*	0.05*	0.05*	0.64	0.98	0.81	0.63
a=c	0.43	0.67	0.17	0.88	0.89	0.46	0.47	0.28	0.98
b=c	0.52	0.44	0.28	0.02*	0.02*	0.81	0.47	0.17	0.59
d=0	0.94	0.54	0.92	0.87	0.93	0.39	0.64	0.30	0.67
Observations	873	841	841	873	873	873	840	840	840
# of IDs	873	841	841	873	873	873	840	840	840

Notes: All monetary amounts are winsorized at the 99th percentile. All values in US Dollars. All regressions control for pre-treatment mean of dependent variable. Data from rounds 3-6 only. Standard errors clustered at household level in parentheses. ***, **, and * indicate significance at 1%, 5%, and 10%.

Table WA2. Placebo test for table 5: downstream outcomes

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
	Farming	Non-farming			Food security ¹		Expenditures				
	Total spent on farming inputs	Has a market business	Total business investment	Total income	Did not have enough food at least once (last 6 months)	Number of days reduced meals (last 30 days)	Total	Food	Personal	Household goods	Children
Panel A. Pooled											
Dual headed household * Sampled for account	1.84 (1.01)*	0.06 (0.06)	3.02 (3.94)	5.48 (2.91)*	-	-	4.06 (6.93)	-1.34 (2.74)	1.63 (1.39)	2.01 (1.19)*	-0.30 (0.59)
Single headed * sampled for account	0.28 (0.52)	0.03 (0.04)	-0.23 (1.97)	-0.76 (1.40)	-	-	0.34 (3.87)	-0.32 (1.71)	0.50 (0.69)	-0.03 (0.88)	0.34 (0.29)
Single headed	-3.15 (0.96)***	-0.15 (0.06)**	-3.91 (3.97)	-12.46 (2.75)***	-	-	-35.61 (5.49)***	-14.17 (2.55)***	-5.89 (1.06)***	-2.25 (0.96)**	-1.45 (0.55)***
Dep. Var. Mean (control, dual-headed hhs)	6.03	0.30	9.00	19.33	-	-	62.25	28.16	8.12	6.80	1.67
Dep. Var. SD (control, dual-headed hhs)	8.15	0.46	33.19	22.78	-	-	43.84	21.92	8.49	6.60	4.89
Observations	855	873	830	873	-	-	843	842	843	843	837
# of IDs	855	873	830	873	-	-	843	842	843	843	837
Panel B. By treatment											
Dual headed household * male only sampled for account (a)	2.28 (1.16)**	0.07 (0.06)	4.33 (3.99)	6.94 (3.67)*	-	-	4.82 (7.34)	-1.81 (2.92)	1.65 (1.47)	2.67 (1.71)	-0.30 (0.50)
Dual headed household * female only sampled for account (b)	0.96 (1.13)	0.06 (0.06)	5.23 (3.91)	3.29 (3.61)	-	-	3.99 (7.21)	-1.28 (2.87)	1.92 (1.45)	2.17 (1.68)	-0.28 (0.49)
Dual headed household * both spouses sampled for account (c)	2.21 (1.08)**	0.04 (0.06)	0.51 (3.71)	6.11 (3.42)*	-	-	3.61 (7.02)	-1.09 (2.79)	1.39 (1.41)	1.45 (1.63)	-0.31 (0.48)
Single headed * sampled for account (d)	0.28 (0.81)	0.03 (0.04)	-0.26 (2.88)	-0.78 (2.56)	-	-	0.33 (5.17)	-0.32 (2.06)	0.50 (1.04)	-0.04 (1.20)	0.34 (0.35)
Single headed	-3.15 (1.06)***	-0.15 (0.06)**	-3.84 (3.70)	-12.45 (3.37)***	-	-	-35.59 (5.48)***	-14.18 (2.18)***	-5.88 (1.10)***	-2.24 (1.28)*	-1.45 (0.37)***
p-values:											
Joint significance a, b, and c = 0	0.12	0.70	0.35	0.20	-	-	0.93	0.94	0.61	0.40	0.93
a=b=c	0.34	0.86	0.29	0.50	-	-	0.97	0.93	0.86	0.55	1.00
a=b	0.20	0.94	0.80	0.27	-	-	0.87	0.79	0.79	0.68	0.96
a=c	0.95	0.61	0.25	0.79	-	-	0.80	0.71	0.79	0.28	0.96
b=c	0.19	0.67	0.15	0.35	-	-	0.94	0.92	0.58	0.51	0.92
d=0	0.73	0.47	0.93	0.76	-	-	0.95	0.88	0.63	0.97	0.34
Observations	855	873	830	873	-	-	843	842	843	843	837
# of IDs	855	873	830	873	-	-	843	842	843	843	837

Notes: All monetary amounts are winsorized at the 99th percentile. All values in US Dollars. All regressions control for pre-treatment mean of dependent variable. Data from rounds 3-6 only. Standard errors clustered at household level in parentheses. ***, **, and * indicate significance at 1%, 5%, and 10%.

¹Food security questions were not asked in round 1.

Table WA3. Placebo Test for Table 6: Impact of savings account on inter-household transfers

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	One-sided (remittance) type of partnership				Give-and-Take type of partnership			
	Received transfer	Amount received	Gave transfer	Amount given	Received transfer	Amount received	Gave transfer	Amount given
Panel A. Pooled								
Dual headed household * Sampled for account	0.02 (0.06)	-2.30 (4.74)	0.05 (0.06)	1.57 (0.96)	0.04 (0.06)	1.54 (1.69)	-0.01 (0.06)	-0.29 (1.33)
Single headed * sampled for account	-0.03 (0.05)	-0.79 (2.10)	0.03 (0.04)	0.44 (0.27)	-0.03 (0.04)	0.49 (0.39)	0.02 (0.04)	0.25 (0.23)
Single headed	-0.09 (0.07)	-6.62 (4.75)	-0.17 (0.06)***	-1.68 (0.79)**	-0.15 (0.06)**	-3.96 (1.46)***	-0.26 (0.06)***	-3.60 (1.27)***
Dep. Var. Mean (control, dual-headed hhs)	0.56	16.12	0.35	2.40	0.37	4.58	0.45	4.12
Dep. Var. SD (control, dual-headed hhs)	0.50	41.39	0.48	7.18	0.48	13.14	0.50	11.30
Observations	884	884	884	884	884	884	884	884
# of IDs	884	884	884	884	884	884	884	884
Panel B. By treatment								
Dual headed household * male only sampled for account (a)	-0.01 (0.07)	-5.06 (3.94)	0.03 (0.06)	1.25 (1.17)	0.02 (0.07)	-0.11 (1.85)	0.01 (0.07)	0.48 (1.07)
Dual headed household * female only sampled for account (b)	0.03 (0.07)	-0.67 (3.87)	0.05 (0.06)	1.78 (1.15)	0.06 (0.06)	2.02 (1.82)	-0.02 (0.07)	0.14 (1.05)
Dual headed household * both spouses sampled for account (c)	0.04 (0.07)	-1.59 (3.70)	0.07 (0.06)	1.63 (1.10)	0.03 (0.06)	2.34 (1.74)	0.00 (0.06)	-1.16 (1.00)
Single headed * sampled for account (d)	-0.03 (0.05)	-0.79 (2.74)	0.03 (0.04)	0.44 (0.81)	-0.03 (0.05)	0.49 (1.29)	0.02 (0.05)	0.25 (0.74)
Single headed	-0.09 (0.07)	-6.62 (3.61)*	-0.17 (0.06)***	-1.68 (1.07)	-0.15 (0.06)**	-3.96 (1.70)**	-0.26 (0.06)***	-3.59 (0.98)***
p-values:								
Joint significance a, b, and c = 0	0.86	0.53	0.67	0.42	0.82	0.30	0.98	0.26
a=b=c	0.73	0.42	0.74	0.87	0.81	0.26	0.92	0.14
a=b	0.57	0.21	0.69	0.61	0.54	0.20	0.69	0.72
a=c	0.44	0.30	0.43	0.70	0.86	0.12	0.88	0.07*
b=c	0.86	0.78	0.72	0.87	0.62	0.83	0.77	0.14
d=0	0.54	0.77	0.53	0.59	0.57	0.70	0.59	0.74
Observations	884	884	884	884	884	884	884	884
# of IDs	884	884	884	884	884	884	884	884

Notes: All monetary amounts are winsorized at the 99th percentile. All values in US Dollars. All regressions control for pre-treatment mean of dependent variable. Data from rounds 3-6 only. Standard errors clustered at household level in parentheses. ***, **, and * indicate significance at 1%, 5%, and 10%.

Table WA4. Placebo test for Table 7: Spillover effects

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	One-sided (remittance) type of partnership				Give-and-Take type of partnership			
	Received transfer	Amount received	Gave transfer	Amount given	Received transfer	Amount received	Gave transfer	Amount given
Num. of transfers listed in round 1	0.04 (0.01)***	1.26 (0.38)***	0.04 (0.01)***	0.58 (0.11)***	0.07 (0.01)***	1.36 (0.17)***	0.07 (0.01)***	0.99 (0.10)***
Num. of round 1 transfers with partner matched to sample list	0.00 (0.02)	0.88 (0.87)	0.02 (0.01)	0.09 (0.26)	-0.02 (0.01)	-0.17 (0.39)	0.00 (0.01)	-0.41 (0.22)*
Num. of round 1 transfers with partner matched and <i>sampled for account</i>	-0.02 (0.02)	-3.36 (1.38)**	0.01 (0.02)	-0.70 (0.40)*	0.01 (0.02)	0.13 (0.61)	-0.02 (0.02)	-0.17 (0.35)
Dual headed household * Sampled for account	0.01 (0.06)	-2.02 (3.16)	0.05 (0.05)	1.53 (0.92)*	0.04 (0.05)	1.53 (1.40)	-0.01 (0.05)	-0.24 (0.80)
Single headed * sampled for account	-0.03 (0.05)	-0.80 (2.70)	0.03 (0.04)	0.44 (0.79)	-0.03 (0.04)	0.49 (1.20)	0.02 (0.04)	0.26 (0.69)
Single headed	0.04 (0.06)	-2.45 (3.55)	-0.02 (0.05)	0.07 (1.04)	0.07 (0.05)	0.61 (1.58)	-0.05 (0.05)	-0.63 (0.90)
Dep. Var. Mean (control, dual-headed hhs)	0.58	14.25	0.40	3.70	0.40	5.88	0.45	3.89
Dep. Var. SD (control, dual-headed hhs)	0.49	31.63	0.49	10.67	0.49	16.93	0.50	9.75
Observations	884	884	884	884	884	884	884	884
# of IDs	884	884	884	884	884	884	884	884

Notes: All monetary amounts are winsorized at the 99th percentile. All monetary values in US Dollars. Regressions control for own treatment status, household type, and interactions between treatment status and household type. Data from rounds 3-6 only. Standard errors clustered at household level in parentheses. ***, **, and * indicate significance at 1%, 5%, and 10%.

Table WA5. Placebo test for Table 8: intra-household savings behavior

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	Female					Male				
	Reports having bank account	Made deposit	Amount	Made withdrawal	Amount	Reports having bank account	Made deposit	Amount	Made withdrawal	Amount
Male only sampled for account (a)	-0.01 (0.01)	0.01 (0.02)	0.30 (0.87)	-16.08 (37.77)	20.89 (39.15)	0.02 (0.03)	0.02 (0.02)	4.34 (2.31)*	-0.01 (0.02)	1.05 (4.92)
Female only sampled for account (b)	-0.01 (0.01)	0.00 (0.02)	0.12 (0.85)	-34.82 (37.16)	7.99 (38.52)	0.07 (0.03)*	0.02 (0.02)	0.84 (2.30)	0.02 (0.02)	7.58 (4.93)
Both sampled for account (c)	-0.01 (0.01)	0.03 (0.02)*	1.00 (0.80)	-31.69 (35.11)	23.33 (36.39)	0.05 (0.03)	0.00 (0.02)	1.30 (2.15)	-0.01 (0.02)	0.51 (4.58)
p-values:										
Joint significance a, b, and c = 0	0.46	0.20	0.51	0.76	0.91	0.25	0.47	0.20	0.19	0.28
a=b=c	0.58	0.18	0.41	0.84	0.88	0.42	0.34	0.17	0.1*	0.18
a=b	0.82	0.59	0.82	0.58	0.71	0.19	0.82	0.09*	0.07*	0.14
a=c	0.33	0.24	0.33	0.62	0.94	0.47	0.18	0.11	1.00	0.90
b=c	0.45	0.07*	0.22	0.92	0.63	0.47	0.27	0.80	0.05*	0.08*
Dep. Var. Mean (control, dual-headed hhs)	0.01	0.00	0.00	493.46	395.42	0.03	0.01	0.21	0.01	0.64
Dep. Var. SD (control, dual-headed hhs)	0.11	0.00	0.00	271.59	271.02	0.16	0.12	1.77	0.11	5.66
Observations	480	474	474	480	480	468	450	450	468	468
# of IDs	480	474	474	480	480	468	450	450	468	468

Notes: All monetary amounts are winsorized at the 99th percentile. All values in US Dollars. All regressions control for pre-treatment mean of dependent variable. Data from rounds 3-6 only. Standard errors clustered at household level in parentheses. ***, **, and * indicate significance at 1%, 5%, and 10%.

Table WA6. Placebo test for Table 9: intra-household transfers, expenditures, and income

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
	Transfers				Expenditures (male)					Expenditures (female)					Total income	
	From wife to husband	Amount	From husband to wife	Amount	Total	Personal	Food	HH expenses	Children	Total	Personal	Food	HH expenses	Children	Male	Female
Male only sampled for account (a)	-0.09	0.05	0.04	0.61	1.77	1.20	-1.43	2.12	-0.50	-2.38	0.09	-1.45	-0.33	-4.03	5.41	0.47
	(0.07)	(0.51)	(0.05)	(1.44)	(5.84)	(1.33)	(2.15)	(1.36)	(4.19)	(3.14)	(0.56)	(1.55)	(0.69)	(2.19)*	(3.98)	(2.13)
Female only sampled for account (b)	-0.09	-0.40	0.04	-1.72	3.76	2.13	-0.22	1.44	3.90	-0.19	0.19	-0.38	0.48	-4.07	2.66	1.04
	(0.07)	(0.50)	(0.05)	(1.44)	(5.83)	(1.33)	(2.15)	(1.35)	(4.19)	(3.08)	(0.55)	(1.52)	(0.68)	(2.16)*	(3.98)	(2.09)
Both sampled for account (c)	-0.09	0.00	0.03	-0.67	-1.81	0.85	-2.25	0.47	5.78	0.37	0.16	0.25	0.01	-4.97	5.62	0.11
	(0.06)	(0.47)	(0.05)	(1.34)	(5.42)	(1.23)	(1.99)	(1.26)	(3.89)	(2.91)	(0.52)	(1.43)	(0.64)	(2.03)**	(3.70)	(1.98)
p-values:																
Joint significance a, b, and c = 0	0.46	0.73	0.86	0.32	0.69	0.43	0.58	0.33	0.23	0.75	0.99	0.61	0.63	0.1*	0.41	0.95
a=b=c	1.00	0.54	0.97	0.20	0.49	0.49	0.52	0.32	0.19	0.56	0.98	0.42	0.42	0.83	0.63	0.87
a=b	0.95	0.32	0.95	0.07*	0.70	0.44	0.53	0.58	0.24	0.43	0.85	0.44	0.19	0.99	0.44	0.76
a=c	0.98	0.92	0.82	0.28	0.46	0.74	0.64	0.14	0.07*	0.29	0.88	0.19	0.56	0.61	0.95	0.84
b=c	0.96	0.34	0.88	0.38	0.25	0.24	0.25	0.38	0.59	0.83	0.96	0.62	0.41	0.62	0.37	0.59
Dep. Var. Mean (control, dual-headed hhs)	0.37	0.88	0.82	8.55	45.84	6.34	19.42	4.39	10.69	19.84	2.26	10.20	2.74	8.38	13.06	6.90
Dep. Var. SD (control, dual-headed hhs)	0.48	1.91	0.39	10.37	38.63	7.62	16.07	6.21	27.63	18.00	3.30	11.33	2.48	28.46	21.74	10.66
Observations	480	480	468	468	453	453	452	453	451	477	477	477	477	472	468	480
# of IDs	480	480	468	468	453	453	452	453	451	477	477	477	477	472	468	480

Notes: All monetary amounts are winsorized at the 99th percentile. All values in US Dollars. All regressions control for pre-treatment mean of dependent variable. Data from rounds 3-6 only. Standard errors clustered at household level in parentheses. ***, **, and * indicate significance at 1%, 5%, and 10%.