Who You Train Matters: Identifying Combined Effects of Financial Education on Migrant Households*

Yoko Doi, *World Bank*

David McKenzie, *World Bank, BREAD, CEPR, CREAM and IZA*#

Bilal Zia, *World Bank*

Abstract

There has long been a concern among policymakers that too much of remittances are consumed and too little saved, limiting the development impact of migration. Financial literacy programs have become an increasingly popular way to try and address this issue, but to date there is no evidence that they are effective in inducing savings among remittance-receiving households, nor is it clear whether such programs are best targeted at the migrant, the remittance receiver, or both. We conducted a randomized experiment in Indonesia which allocated female migrants and their families to a control group, a migrant-only training group, a family member-only training group, and a training group in which both the migrant and a family member were trained. Three rounds of follow-up surveys are then used to measure impacts on the financial knowledge, behaviors, and remittance and savings outcomes of the remaining household. We find that training both the migrant and the family member together has large and significant impacts on knowledge, behaviors, and savings. Training the family member alone has some positive, but smaller effects, whilst training only the migrant leads to no impacts on the remaining family members. The results show that financial education can have large effects when provided at a teachable moment, but that this impact varies greatly with who receives training.

JEL Codes: F24, O12, C93.

Keywords: Financial literacy; Remittances; Migration.

---

*The authors thank the editor, two anonymous referees, Dean Yang and participants at the Fifth Migration and Development conference for helpful comments; Christian Salas Pauliac for excellent research assistance; and Chitra Buchori, Elisabeth Dwi Nurani, Cynthia Clarita Kusharto, and Mia Amalia for their help and dedication throughout the implementation process. The umbrella project for this paper could not have been possible without the guidance of P. S. Srinivas, Lead Financial Economist, Tunc Uyanik, Director, and Hormoz Aghdaey, Lead Financial Sector Specialist, of Financial and Private Sector Development, East Asia & the Pacific Region, as well as Stefan G. Koeberle, Country Director for the World Bank in Indonesia. We are especially grateful to the pilot program's implementing partners, the Regional Economic Development Institute (REDI) and the migrant workers' recruiting agencies (PPTKIS) in Malang, and support from the Government of Indonesia, especially from Pak Erlangga Mantik and Pak Bobby Hamzar Rafinus from the Office of the Coordinating Ministry for Economic Affairs; Pak Jumhur Hidayat and Ibu Lisna Y. Poeloengan from the National Board for the Placement and Protection of Indonesian Overseas Workers (BNP2TKI); and Pak Djaka Ritamtama and Teddy Priambodo from the Manpower and Transmigration Office (Disnakertrans) of Malang District. Financial assistance from the Gender Action Plan (GAP) and the Dutch Government through Trust Fund for Investment Climate and Multi-Donor Facility for Trade and Investment Climate (MDFTIC) is gratefully acknowledged.

Corresponding author: email dmckenzie@worldbank.org; Phone: (202) 458-9332; Fax (202) 522-1155.

Introduction

Officially recorded remittance flows to developing countries are estimated to have reached $351 billion in 2011 (Mohapatra et al., 2011), more than three times the total official development assistance going to developing countries.[1] However, policymakers and much of the migration literature have long worried that the majority of remittances are used for consumption purposes, not savings or investment, reducing their long-term development potential (e.g. Chandavarkar, 1980; Connell, 1980; Durand and Massey, 1992; and IADB, 2004). While there are studies which show positive impacts of remittances on education and investment (e,g, Cox-Edwards and Ureta, 2003; Woodruff and Zenteno, 2007; and Yang, 2008), recent work by Ashraf et al. (2014) has shown remittance receivers are likely to save less than their remittance senders desire, while insights from behavioral economics suggests that many people in general may save less than rational financial planning would predict (Benton et al., 2007). Moreover, since temporary migrants from developing countries are earning high earnings for a short period, permanent income theory would suggest a large fraction of remittances received should be saved.

One of the main policy responses to try and increase savings from remittances and improve financial management among remittance receivers has been the introduction of financial literacy programs for migrants and/or their families. For example, the Government of the Philippines launched a financial literacy campaign based on the concern that migrant families enjoy substantial consumption gains while their family members are abroad, but then have nothing left when the migrants return.[2] New Zealand's aid agency is funding financial education for seasonal workers from the Pacific Islands in New Zealand[3], and the Inter-American Development Bank has conducted financial education programs for remittance receivers in Guatemala and Nicaragua.[4] The global financial education program of Microfinance Opportunities/Freedom from Hunger/Citi Foundation now has a specialized curriculum directed at remittance receivers, aimed at helping them better use the money they receive.[5]

---

[1] Total Official Development Assistance to developing nations is estimated at $90 billion for 2010 http://stats.oecd.org/Index.aspx?DatasetCode=ODA_RECIP [accessed 20 April, 2012].

[2] http://jedayang.com/2011/08/24/financial-literacy-campaign-and-the-philippine-government/ [accessed 20 April, 2012]

[3] http://www.aid.govt.nz/media-and-publications/development-stories/february-2012/vakameasina-training-extended-rse-employees [accessed 20 April, 2012]

[4] http://www.thedialogue.org/projects#Transnational_Families [accessed 20 April, 2012].

[5] http://www.globalfinancialeducation.org/future.html#remittance [accessed 20 April, 2012]. Our modules, though closely related to the MFO content, is not entirely a derivative since the MFO module on remittances was not yet available at the time of our study.

However, while there is a strong association between financial literacy and levels of savings in both developed (Lusardi, 2008) and developing countries (Cole et al., 2011), the limited evidence on the causal impacts of general financial literacy programs in developing countries has shown relatively limited effects.[6] For example, Cole et al. (2011) find that a financial literacy program for households in Indonesia has little impact on their propensity to open savings accounts. However, one important recommendation from financial literacy experts is that financial education should be delivered at "teachable moments", when the information is most applicable to a person's life (GAO, 2004). One of the few research studies to examine such a case is Bertrand and Morse (2011), who found that offering information and making interest rate costs more understandable right at the moment U.S. borrowers are deciding on payday loans can have large effects. Offering financial literacy training to migrants and/or their family members right before the migrant member leaves potentially offers another such moment, since this is precisely the time when migrants and family members have to decide the method of remitting, amounts and frequency of remittances, and how to manage the new and relatively large inflows of income.

This paper provides the first experimental evidence on whether financial literacy programs work to improve financial knowledge and financial management, and thereby increase savings, in migrant-sending households. Our context is a pilot program on financial literacy for female overseas migrant workers and their families developed as a partnership between the Government of Indonesia and the World Bank and implemented in Greater Malang area and Blitar District of East Java Province. The training program emphasized financial planning and management, savings, debt management, sending and receiving remittances, and understanding migrant insurance. One key policy question is whether such information is best delivered to the migrant worker herself, to someone in their remaining household, or to both. Our experiment directly tests this by means of three treatment groups: a group in which only the migrant worker receives training, a group in which the main remittance receiver or decision-maker in the remaining household receives training, and a group in which both receive training.

We conduct three rounds of follow-up surveys and find that training the family member, and training both the family member and the migrant result in increases in financial knowledge, with evidence this impact is greater when both the migrant and her family member are trained.

[6] A recent meta-analysis suggests little impact of many programs in either developed or developing countries (Fernandes et al, 2013).

Training results in no increase in the amount or frequency of remittances, but when offered to both the migrant and the family, leads to more financial planning and budgeting, and to more saving. The effect sizes are reasonably large: we find households in which both the migrant and her family member were trained are 19 percentage points more likely to be aware of financial terms, 10 percentage points more likely to have saved in the last six months, and have almost twice the savings out of remittances as the control group. There are smaller and less significant impacts on savings when only the family member is trained, and small and insignificant impacts on the knowledge, behaviors, and outcomes of family members when only their migrant worker is trained. Furthermore, we find some evidence of significant complementarities in treatment as the savings propensity is higher when both family members and migrant workers are trained together than the sum of the effects of treating them separately. Comparing our results to theoretical predictions suggests that the main channel is through improving the ability of remaining household members to optimize their savings and consumption decisions.

This paper relates to three main literatures. First, there is a nascent literature that has examined the impacts of financial education in developing countries. Examples include Cole et al. (2011) who look at savings account take-up in Indonesia, Hastings and Tejeda-Ashton (2008) who examine selection of retirement funds in a hypothetical scenario, and Gine et al. (2011) and Cai (2012) who both examine the decision of farmers to purchase weather insurance, and the interaction of financial education with social networks. Two parallel and complementary studies also look at financial literacy and remittances. Gibson et al. (2014) study the impact of teaching migrants in New Zealand and Australia about the different methods available for remitting and the costs of each, finding an increase in financial knowledge and information seeking behavior, reduced risk of switching to costlier remittance products, but no change in either the frequency or level of remittances. They do not teach or examine savings behavior, and measure only outcomes on the migrants, not on the sending families. Seshan and Yang (2014) provide a savings-oriented financial literacy workshop to Indian male migrant workers in Qatar. Their program is considerably shorter in duration, delivered only to migrants and not to the family members, and focuses more on inspiring migrants to save than on teaching detailed financial planning and saving knowledge. They find some changes in financial practices in their full sample, but no significant impacts on savings levels or remittances. However, when they split their sample by baseline savings levels, training raises the migrant's savings levels in the low baseline savings group. Our work complements and builds on these studies, by focusing on outcomes for

household members left behind in the developing country, implementing multiple surveys for more statistical power, and by examining how the impacts of the course vary with who is trained.

Secondly, our paper contributes to a new experimental literature on policies to enhance the development impact of migration, which are summarized in McKenzie (2012b). Recently Ashraf et al. (2014) and Chin (2011) have both found increases in savings among migrants in response to direct efforts to provide greater access to savings accounts, which complements our finding that families are saving less than may be optimum for them. Our paper shows that offering financial education to migrants and their families offers another way to get more savings out of the same levels of remittances.

Finally, our paper contributes to existing work on testing impacts of multiple development interventions, and finds some suggestive evidence of complementarities. Specifically, we find our combined treatment of training both migrant workers and their families is more effective at inducing households to save than the sum of the effects of treating them separately. Our point estimates suggest the combined effect is also greater than the sum of the individual treatment effects for a number of other outcomes, although large standard errors mean we cannot reject a lack of complementarity for most of these other outcomes. Existing work that combines treatments, such as Karlan and Udry (2012) who study the impact of cash transfers and business training for tailors in Ghana, or Gine and Mansuri (2011) who study loans and business training for Pakistani farmers, has not find any such evidence of complementarities. In both cases their power for detecting complementarities is relatively low, and they are looking for complementarities between business training and another business input, rather than for complementarities in who is trained. We therefore view our results as at least providing some suggestive evidence that complementarities in treatment impacts could be stronger than the existing literature would suggest.

The remainder of the paper is structured as follows: Section 2 provides the Indonesian context, the sample used in our experiment, the content of the financial literacy training program, and the experimental design. Section 3 provides a short theoretical discussion of the mechanisms through which it may matter who is trained, and through which complementarities may arise. Section 4 provides our results on the impacts of the financial literacy program on the knowledge, financial behaviors, and remittance and savings outcomes for migrant families. Finally, Section 5 concludes.

2. Background, Sample, and the Financial Literacy Intervention

2.1. Background and Context

Formal, government-administered placement of labor migrants from Indonesia began in 1969, and in the 1970s a regulated private sector for migration recruitment and placement was authorized and developed. Hugo (2009) estimates that Indonesia is the second largest source country for labor migration in Asia after the Philippines, with an estimated 2.7 million Indonesians working abroad with official permission, and many more irregular migrants. The majority (78% in 2007) of migrant workers from Indonesia are female, primarily working as domestic workers, nannies and aged care workers in Hong Kong, Malaysia, Singapore, and the Middle East (Hugo, 2007; IOM, 2010). Official remittances received from migrants have grown from US$5.4 billion in 2005 to US$7.3 billion in 2010.

Indonesian overseas migrant workers, known locally as *Tenaga Kerja Indonesia (TKIs)*, apply for jobs with privately owned recruitment agencies, which are registered and licensed by the Government, and locally known as PPTKIS.[7] These agencies not only recruit migrants for jobs abroad, but are responsible for preparing workers for these jobs abroad, and arranging their travel. This form of temporary migration through regulated labor agencies is common in much of South Asia, and accounts for most of the migration to countries in the Persian Gulf, as well as significant migration to Hong Kong, Taiwan, Malaysia and Singapore – a point we return to in section 4.6 when discussing the generalizability of these results. It is mandatory under the Migrant Worker Placement and Protection Law for all such workers to undertake job and language training (Ignacio and Mejia, 2009). Typically individuals recruited to work abroad come and attend training sessions of several months with the recruitment agency where they learn occupation-specific skills for working abroad (e.g. domestic workers learn about the use of modern household appliances and overseas standards for room cleaning), as well as receive a general pre-departure briefing covering issues such as safety and cultural differences abroad. The recruitment agencies are also responsible for enrolling the workers in a mandatory insurance program (which migrants pay Rp 400,000 (approximately US$44) for as part of their placement fee), which covers migrants in the event of accidents, illness, unpaid wages or premature contract termination by the employer, or death while abroad.

[7] PPTKIS = Perusahaan Penempatan Tenaga Kerja Indonesia Swasta (Privately-owned Indonesian Manpower Placement Company).

The migrants and their families typically come from rural areas and have relatively low levels of education, and limited use and knowledge of formal financial services. A diagnostic study found respondents reporting that very little of the money received as remittances is saved or invested (World Bank, 2010a, 2010b). To address such knowledge constraints, the World Bank, in partnership with the Government of Indonesia, initiated the "Pilot Program on Financial Literacy Education for Migrant workers and their Families" with the aim of identifying effective ways of improving the financial literacy of migrant worker households.

2.2 The Study Sample and Randomization Details

The first step in designing this pilot was a diagnostic study (World Bank, 2010a) which gathered information on where there was a high concentration of migrant worker households and PPTKIS. Based on this assessment, East Java province was identified as an area with high numbers of both migrants and PPTKIS, and within East Java, the Greater Malang and neighboring Blitar districts as an area where there were sufficient PPTKIS to partner with. We then collaborated with Malang's Manpower and Transmigration Office and 11 PPTKIS based in Greater Malang to obtain a sample of migrant workers and their families for this pilot. Greater Malang area (3.7 million population in 4686 square Km) and Blitar District (1.12 million population in 1589 square KM) are fairly large rural areas, with few migrants recruited at the same time from the same villages. We therefore believe spillovers among subjects to not be very likely in our context.

Recruitment was on a rolling basis, with the project team periodically contacting the 11 PPTKISs to obtain lists of workers originating in the Greater Malang and Blitar districts who were recruited by these companies to work abroad. The PPTKIs selected workers who were either staying in their dormitory facilities while undergoing training, or otherwise lived close by. These PPTKIs recruit both males and females, but the males typically do not come and stay in dormitory accommodation, so males were only selected if they lived nearby. They did not screen workers for interest in participating in training, so the workers should be considered as broadly representative of Indonesian female migrants. We set a target sample size of 400 households, and continued to collect workers in batches from these recruiting agencies until this target had been met.

Almost all (96%) of the migrants are female, with median age of 29. They are typically the daughter (41%), spouse (30%), or sibling (10%) of the household head. Education levels

vary, with 26 percent having completed at most primary schooling, 45 percent secondary schooling, 28 percent senior high school, and only 1 percent a higher degree. The main occupation for migrant work abroad is as a housemaid (80%), with Hong Kong, Taiwan and Malaysia the main destination countries.

As batches of worker names were received from the PPTKIS, they were entered by project staff onto an Excel worksheet in the order listed by the PPTKIS, and a random number generator used to assign individuals to treatment status. Since batches of workers were often not of size divisible by four, and were of varying numbers, and that the only information available on the workers was basic data supplied by the PPTKIS, we did not stratify the randomization. The sample of 400 migrant workers was randomly assigned into one of the following groups:

- Treatment A: Financial literacy training is provided to the migrant worker only
- Treatment B: Financial literacy training is provided to the migrant worker's household member only
- Treatment C: Financial literacy training is provided separately to both the migrant worker and to their household member
- Group D: Control group with no financial literacy training provided

Out of the sample of 400 migrant workers, this random assignment resulted in101 migrant households being assigned to treatment A, 97 to treatment B, 98 to treatment C, and 104 to control.

The motivation for these different assignments was that it was ex ante unclear who should be the focus of the training. Pre-departure training in a number of countries often focuses just on the migrants. Training migrants is convenient because they are already gathered in one place for job training, and offers the possibility of allowing them to better budget and save abroad, and hence send more remittances back. However, it may have limited impacts on the ability of remaining household members to manage the money they are receiving. In contrast, training remaining household members offers the possibility of teaching those receiving remittances how to better manage money, but requires more effort in getting family members to come to a training location and may have limited impact if the migrant controls how any money sent back is used. The question then arises whether there are complementarities from training both the migrant and her family member together. Our randomization allows us to test between these competing ideas for whom to train.

2.3 Baseline Survey

The baseline surveys were conducted on a rolling basis from February to June 2010 to coincide with the training cycle (see timeline in online Appendix 1). The baseline survey was directed at the family member of the migrant who would be responsible for receiving remittances and for household decision-making in their absence. In cases where the family member attended training, interviews were done at the training location prior to the commencement of training. For the control group, migrant-training only group, and cases in the other treatments where the family member was invited but didn't show up for training, interviews were done at the dwelling of the household.

In cases where the primary remittance receiver was too old, sick, unable to leave his or her job, or otherwise reluctant to travel, in some cases another household member came to attend the training session – who was then the baseline respondent. The result is that there are some differences in baseline individual characteristics of the respondents by treatment status, with the respondents from the family training treatment groups being slightly younger and more likely to be male than in the migrant-only or the control group. Nevertheless, reported household level outcomes are similar across the different treatment groups (see Appendix Table A1). The follow-up surveys (described below) put in place strict protocols to ensure consistency in which household member was interviewed, ensuring the main remittance receiver responsible for household financial decision-making in the migrant's absence was interviewed. Table 1 shows balance across treatment groups in the individual characteristics of the respondents at the time of follow-ups.

Household respondents in the study are on average 41 years old at baseline, with 33 percent female, and 85 percent married. They are typically the spouse, parent, or sibling of the migrant. Education levels are lower than the migrant's levels on average: 14% have not completed primary school, 36% have only completed primary schooling, 28% secondary schooling, 19% senior high school, and 3 percent have a higher degree. Average household income is approximately US$150 per month.

Only half of all households report having any savings at baseline, and only 3 percent record income and expenditure. Despite 92 percent of respondents saying they discuss financial issues with family, only 40 percent had heard of the term financial budgeting, only 39 percent knew what an exchange rate was, and only 29 percent had heard of the TKI insurance that all

legally registered migrant workers must have. These baseline levels suggest potential scope for financial literacy training to build knowledge and develop savings behaviors.

2.4 The Financial Literacy Intervention

Training was generally conducted at the Singosari Training Center in Malang, which is a complex managed by the Malang's Manpower & Transmigration Office. Aside from classrooms, workshops, meeting halls and dining halls, it also rents out rooms. Training sessions were also conducted directly at the offices of the PPTKIS when an individual PPTKIS had sufficient workers about to embark. These locations were very convenient for the migrant workers, since they typically live in facilities run by the PPTKIS for two to six months prior to departure, and the PPTKIS arranged transportation from their locations to the Training Center. Family members typically lived further away. The Regional Economic Development Institute (REDI) coordinated with the PPTKIS to invite family members to this training, and family members were provided with a transportation allowance and one night's accommodation in order to facilitate their access to these training sessions. Training took place within days of the baseline survey, again over the February to June 2010 period.

Financial literacy training sessions for migrants and for their family members were conducted separately.[8] The training sessions for the migrant workers lasted two full days of 9 hours per day (see Appendix 1), while the training session for families lasted two half-days of 4 hours each day. The training for migrant workers covered six core modules: financial management, which included making a financial plan, budgeting, and the importance of discussing and agreeing with family the use of money prior to departure; understanding banking services, including how to use bank accounts, ATMs and other products; savings, including both the importance of savings and different savings options; debt management, including sources of loan options and calculating interest rates; sending remittances, including formal ways to remit, and understanding exchange rates; and understanding insurance, with particular emphasis on the TKI insurance. The training for family members covered five modules in a compressed version of the migrant's course: financial planning and management, savings, debt management, sending

[8] An alternative would be to train the migrant and their family members together. This would potentially have the advantage of facilitating discussion between family members during the training, but since some of the content is specific for the migrant (e.g. how to remit, banking products abroad, using the TKI insurance) would require family members sitting through content that is not so relevant to them. In addition, separating the training aids in the experimental comparisons.

and receiving remittances, and understanding insurance. Appendix 1 provides more details of the content.

The training methodology was designed to be participative, interactive, and applied. Participants were regularly encouraged to interact through discussion modules, group games and assignments, and sessions designed to share experiences and exchange of thoughts. The emphasis was on practical application to the daily lives of migrants and their families, and specific examples of how to fill in a bank form, how to prepare a financial plan and budget, and how to use an ATM machine were covered. In addition to the course, participants received comic books and folding brochures to reinforce content in a fun way (Appendix Figure 1 gives one example of part of the comic book, warning that once you have money it is important to distinguish between needs and wants). Finally, each participant received a take-home financial book with sample budgeting templates.

2.5 Take-up

Attendance rates for the financial literacy training were high, which is likely due to the training invitations coming to the migrants from the PPTKIS and to the assistance with transportation. In the migrant-only training, 81.2 percent of those invited attended. In the family-member-only training, 76.5 percent of those households who were invited had a family member attend. In the migrant and family joint training, 65.0 percent of invited households had both the migrant and family member attend, a further 9.3 percent had just the migrant attend, and 16.5 percent had just the family member attend, so that in 91 percent of cases the household had someone attend.

We examine the correlates of attendance of the migrant and of the family member and find few predictors of who takes up the training. Migrant attendance is unrelated to baseline household income, or to the education, baseline knowledge of financial terms, or baseline numeracy of the survey respondent. Attendance by a family member is also unrelated to baseline financial knowledge, education, or numeracy, but is higher among households with higher baseline income – perhaps reflecting the impact of travel costs on poorer households attending.

2.6 Follow-up Surveys and Attrition

Three rounds of follow-up surveys were conducted via in-person interviews. The first follow-up survey took place in March 2011 and interviewed 392 of the 400 households (98%).

At this time, 83 percent of households reported the migrant to be abroad, and 9 percent to have had the migrant return, with the mean and median time abroad being 9 months. A second follow-up survey took place in September 2011, and successfully re-interviewed 376 of the 400 households (94%), at which time 79 percent of households still reported having a migrant abroad, with median time abroad of 15 months. The third and final follow-up survey took place in January 2012 and interviewed 365 households (91%), at which time 77 percent of households still had a migrant abroad, with median time abroad of 19 months.

The follow-up surveys were aimed at the family member in charge of receiving remittances and making financial decisions in the household, and effort was made to re-interview the same member each follow-up round. In the few cases where this was not possible, we control for a change in the identity of the respondent in the regressions. The surveys collected information on financial knowledge, behaviors, and outcomes of the household. Appendix 2 provides details on how key outcomes were measured. An important caveat is that we do not re-interview the migrant workers, since the feasibility and cost of interviewing them while abroad did not make this possible.[9] Our focus is thus on outcomes for the remaining household members.

Table 2 tests whether attrition rates at baseline and at each follow-up survey vary by treatment status. We regress a dummy variable for being present in the survey round on treatment assignment, and report both the coefficients, as well as p-values for test of equality across the different treatments. The last column looks at being present in any of the follow-up rounds. The regression coefficients are small, and we cannot reject the null hypothesis of equality of attrition rates across treatments for any of the survey rounds. Given the low level of attrition and that it is unrelated to treatment status, we therefore ignore attrition in our analysis.

[9] We note that Ashraf et al. (2014) have had success interviewing migrants and their family members in person in different countries, while Seshan and Yang (2014) were able to interview family members via phone surveys from the destination country. In our context we did not have budget for in-person interviewing in the multiple countries migrants went to, and phone surveys were also not within the budget we had, and were also considered difficult to do with female migrants working in the homes of their employers who sometimes put restrictions on their phone call use. An alternative would be to ask family members questions about the savings made by migrant members abroad, but Seshan and Yang (2014) provide evidence that questions the reliability of such reports.

2.7 Using Self-reported outcomes

A key issue in analyzing any intervention using survey data is the extent to which the treatment changes self-reporting of outcomes holding actual outcomes constant. For example, if respondents try and give socially-desirable outcomes, they may say they have saved after the training, even if they have not, because the training emphasized savings as a desirable activity. We use two main approaches to help mitigate this problem and ensure that any effects measured are likely to be genuine. First, since much of our analysis involves a comparison across treatments, this form of potential bias is likely to be lower since we can effectively difference out the common effect of treatment on self-reporting. In particular, we see no reason why any such reporting bias should be different if the family member and migrant both received training compared to just having the family member trained. Second, we trace out the causal chain from knowledge, to behaviors and then outcomes and look for consistency in impact throughout this chain. Finally, we note that all existing studies of migrant financial literacy also rely on survey data.

3. Theory: How Might it Matter Who is Trained?

First consider a unitary household making decisions over consumption in periods 1 and 2, denoted C_1 and C_2 respectively. In period 1 the household sends a migrant abroad, who earns income *y*. The household has access to a savings technology in Indonesia which pays interest rate *r*, which is assumed to exceed any return it can earn abroad.[10] It has other endowment income of *A* in each period. The household's problem is then to choose consumption in each period, and the level of savings, *S* to maximize:

$$U(C_0) + \delta U(C_1) \tag{1}$$

Subject to the budget constraints:

$$C_0 + S = A + y \tag{2}$$

$$C_1 = A + (1 + r)S \tag{3}$$

[10] This assumption is based on the fact that household workers often have difficulty accessing bank services in destination countries, and that households facing transaction costs and currency risk will have a preference for saving in the home country.

This gives rise to the standard first-order condition that the household will choose consumption and saving such that the ratio of marginal utilities of consumption in the two periods equals the return on investment times the discount rate:

$$\frac{U\prime(C_0)}{U\prime(C_1)} = (1+r)\delta \tag{4}$$

The migrant will then send remittances to fund the desired saving level and part of the first-period consumption of the remaining family members.

3.1 Financial Education in the Unitary Household Model

If the household is choosing consumption and savings according to (4), then the implication is that whatever level of savings the household is currently practicing is optimal given the constraints the household faces. We can then think of two possible channels through which financial education will affect consumption and savings decisions in this unitary model.

The first possibility is that financial education provides the household with new knowledge about savings technologies available, allowing it to achieve a higher return *r* on savings than is possible without such training. For example, teaching households about banking products that they are unaware of, or of ways to avoid or reduce transactions costs would do this. An increase in *r* will make current consumption relatively more expensive, and so the household will increase savings. Remittances should also increase to fund this additional savings.

A second possibility is that the assumption that the household is able to solve the optimization problem is incorrect. Households that do not keep budgets, spending records, or plan for future expenses may find themselves overspending in the current period. Financial education which teaches better money management skills will then enable the household to move closer to the optimum, and if the household is currently undersaving, result in an increase in savings.[11]

In this unitary model, the impact should be the same whether the migrant or the remaining family member receives financial education, since savings and consumption are household decisions and the assumption is that knowledge is shared within the household. Training both the migrant

[11] A somewhat related argument is that households are time inconsistent because of present bias. As a result, their optimization problem in the current period has a different solution than the optimization problem would have if solved a period in advance. Financial literacy training may teach techniques to overcome this present bias, and again move households closer to the savings level chosen as optimal by a time-consistent decision-maker.

and the family member will only lead to more of an increase in savings than would occur when training just one or the other if training both leads to more of an increase in knowledge about savings technologies, or greater household ability to optimize.

3.2 Financial Education in a Non-Unitary Model

In practice the unitary household model has been rejected in a number of settings, and may be particularly unlikely to hold in a migration context, where distance exacerbates information frictions and limits monitoring within a household (de Laat, 2008; Chen, 2013; Ambler, 2013). The result is then that savings in the home country may be less than is pareto optimal if family members differ in preferences about where to spend (Ashraf, 2009) or about when to spend (Schaner, 2013). The result can then be that the migrant saves some money privately abroad (even if she earns a return lower than r), while the family members remaining in Indonesia save some money there.

We can then think of two key roles for financial education in this context. The first is to operate through the same two channels as in the unitary model, but for individual savings decisions. It should then matter who receives training – training the migrant should enhance the migrant's ability to optimize and potentially increase the return on her savings, while training the remaining family member should enhance their ability to optimize, and potentially the return on their savings. This would suggest a larger impact on savings in Indonesia of training the family member rather than training the migrant. Remittances need not increase in this case, since if the gains to better savings in Indonesia accrue to the family member and not to the migrant, the migrant has weakened incentives to send more money than is the case in the unitary model.

The second role for financial education in this non-unitary context is in improving the efficiency of joint financial decision-making. It could do this by reducing information frictions if the training emphasizes communicating with family members about spending and savings decisions, and, through a focus on financial goal-setting potentially better align the preferences of different family members. If this process results in the household wanting to save more in Indonesia, we would expect this to result in both an increase in remittances and an increase in savings.

3.3 Where Might Complementarities Arise?

The above framework offers several possible avenues for complementarities in training to arise, whereby training both the migrant and the family member yields larger changes than would be

predicted from the sum of the individual impacts. The first potential channel is through learning complementarities. When both the migrant and the remaining family receive training, they may enhance each other's learning through peer effects and reinforcement. If this is the case, we should expect complementarities to show up in knowledge gains.

A second potential channel is through behavioral complementarities. For example, if the migrant thinks that the remaining family members do not keep good control of their finances and are likely to overspend, this weakens the migrant's incentives to change her own behavior and remit more back. But once she know the family members are also being taught to control their finances, the migrant's behavior change may then be reinforced by the knowledge that any additional money sent back will now be used more carefully. If this is the case, we should expect to see the migrant increase remittances along with an increase in savings by the family.

4. Analysis

To analyze the impact of financial literacy training on different outcomes of interest, we estimate the following regression equation:

$$Outcome_{i,t} = a + b * TA_i + c * TB_i + d * TC_i + e * Outcome_{i,0} + f * Round_t + \varepsilon_{i,s} \qquad (5)$$

Where TA_i, TB_i and TC_i are dummy variables indicating assignment to treatment A (Migrant Only), B (Family Only), and C (Migrant and Family), respectively. To increase power we pool together the three follow-up rounds (McKenzie, 2012a).[12] Survey Round indicators are included in the regressions. Robust (White-corrected) standard errors, clustered at the individual level, are reported in parentheses under the coefficients in the tables. Since the regressions are based on original assignment to treatment, all coefficients are estimating *intention to treat* (ITT) effects. The ITT estimate is the relevant measure to focus on for overall policy impacts.[13]

[12] Note that the questions are designed to not double-count time (asking about last 4 months when surveys are only 4 months apart and 6 months otherwise). There is still the possibility that individuals misremember the month and accidentally double-count transactions. This is not a concern for the knowledge outcomes and for outcomes which ask about current behavior, but a potential issue for savings and remittance measures over 6 months. Appendix Tables A5 and A6 show round-by-round results, and show that we still find a large impact of the combined treatment on our aggregate savings outcome in each of the three rounds, with this being statistically significant in two out of three cases.

[13] The take-up of treatment was fairly high, as analyzed in the previous section, and our results are robust when estimating *Treatment on Treated* (TOT) effects. One may be concerned that higher take-up for the combined treatment makes us more likely to find significant effects than for the single treatments. However, we continue to find higher impacts on the key outcomes when doing TOT analysis. Moreover, full take-up of the combined treatment (having both the migrant and family treated) is less than for either single treatment, so if we were to

Comparison of the estimate *d* with either *b* or *c* enables us to test whether training both the migrant and her family is more effective than either one alone. We also test for complementarities in treatment effects by testing whether the combined treatment has a greater effect than would be predicted by the individual treatments, i.e. by testing the null of $c \leq a+b$ against the alternative hypothesis $c>a+b$.

The pooled sample takes into account all available data and we analyze an unbalanced panel with 394 clusters.[14] Since our surveys contain a number of questions related to financial knowledge, behaviors, and outcomes, we follow Kling et al. (2007) in creating aggregate indicators for different families of outcomes. For binary variables, this aggregate outcome is simply the average of the individual questions, while for continuous outcomes it is the average z-score (obtained by subtracting the mean of each variable and dividing it by its standard deviation). Appendix Tables A2-A4 present impacts on the individual questions which make up these aggregates.

4.1 Impact on Financial Knowledge

We start the analysis by presenting treatment effects on financial knowledge. Following the methodology in Carpena et al. (2011), we categorize financial knowledge into three distinct components: financial awareness, applied financial knowledge, and financial numeracy skills.

Financial awareness refers to understanding of basic financial concepts such as an interest rate, exchange rate, transaction fees, savings accounts, budgeting, and insurance. It is measured by asking respondents whether they have heard of each of 12 different financial terms (listed in Appendix Table A2), with the control group on average knowing 39.7 percent of these terms.

Applied financial knowledge is assessed through five questions where respondents are asked to offer financial advice under hypothetical situations. For instance, respondents are asked whether it is possible for someone with only Rp 10,000 to open a bank account; to distinguish whether borrowing money to finance a TV purchase is an income-producing use of a loan or not; and to suggest an appropriate financial product for someone who is worried about meeting expenses if they get sick. The control group on average knew 31.8 percent of the correct responses.

---

consider only cases where both the migrant and the family actually were trained as having received this treatment, the impact would be larger still.

[14] We have re-run our entire analysis using a balanced panel across all waves and the results are robust.

Finally, financial numeracy skills are measured through three questions that require mathematical calculations or comparing percentages with lump sum values. These questions are similar to those introduced by Lusardi and Mitchell (2006) for respondents in developed countries, and have been extensively adapted and used in the developing country literature as well.[15] On average the control group only got 15 percent of these questions right.

Table 3 shows the impacts on these aggregate measures, and appendix tables A2-A4 show the impacts on the individual components of these aggregates. Column 1 shows that it makes a difference who is trained: assigning both the migrant and the family to training leads to a significant 19.2 percentage point increase in awareness of basic financial concepts, assigning just the family member to training leads to a significant 12.3 percentage point increase in financial awareness, while assigning only the migrant worker to financial literacy training does not have any significant impact on financial awareness of the main remittance receiver who remains in the home country. The foot of Table 3 tests for a difference in effect between treatments – we can reject that the migrant-only training has the same effect as either of the treatments which train the family member, while the difference between family-only and migrant-plus-family training has a p-value of 0.075. The migrant family hence learns more when both it and the migrant are trained than when either alone is. However, while the point estimate for the combined treatment (19.2) is greater than the sum of the impacts on the individual treatments (12.3 + 3.9), suggesting additional learning complementarities, it is not significantly greater (p=0.29).

Columns 2 and 3 show the impacts on applied financial knowledge and on financial numeracy skills. Training only the migrant has a small and insignificant effect on both outcomes; the effect sizes are larger for the family only treatment, but remain statistically insignificant. However, the migrant-plus-family treatments has a significant impact on applied financial knowledge, although the point estimates of 5 percentage points is smaller than the impact on financial awareness. The impacts on financial numeracy skills are similar in magnitudes, but insignificant for all three treatment groups.

Overall, these results are consistent with the findings in Carpena, et al. (2011), who likewise find that financial literacy training is a strong tool in making individuals more

[15] See for example, Cole, et al (2011), and Klapper and Lusardi (2011).

financially aware, and has some impact on improving their applied financial knowledge, but is relatively ineffective in making them better at numeracy and tasks involving computational skills.

4.2 Impact on Knowledge of Insurance and Remittance Costs

Next we focus specifically on migration-specific financial knowledge related to remittance transactions and the migrant insurance. Here we start in Table 4 by looking at impacts on individual outcomes in columns 1 through 6, and then at an aggregate outcome measure in column 7. Column 1 shows a very strong treatment effect on household awareness about the mandatory migrant insurance. Fewer than 10 percent of respondents in the control group were aware of this insurance. This awareness increased by 25.6 percentage points in households where both migrants and family members were treated, a fairly substantial impact. These effects are smaller, but also positive and significant for training the migrant only (a 5.7 percentage point increase) or the family member only (a 13.5 percentage point increase).

The remaining columns of Table 4 examine whether households understand the various components that make up the cost of a remittance transfer. Column 2 looks at whether households know it is cheaper to send one large transaction (of Rp 2 million) than to send two smaller transactions (each of Rp 1 million) adding up to the same total. This is cheaper because of the fixed fee component of a remittance transfer. Knowledge of this is high, with 81 percent of the control group getting the correct answer, and the training has no additional impact. Columns 3 through 6 look at whether households know whether a remittance transfer involves a fixed fee on the sender, a fixed fee for the recipient, an exchange rate commission, and/or an interest rate. Column 7 combines these to look at whether they correctly identify all the relevant costs. We see that households assigned to the migrant-plus-family treatment have significantly higher knowledge on these cost components, and overall are 7.9 percentage points more likely to correctly identify the costs of a remittance transaction. The effect size is about half (4.6 percentage points) for the family-only training, and insignificant for the migrant-only training. Despite these differences in magnitude, we cannot reject equality of impacts across the various treatments.

The point estimates suggest knowledge complementarities in knowledge of the migrant insurance program, and knowing a remittance transaction doesn't involve an interest rate. The p-

values are 0.14 and 0.103 respectively for testing that the combined effect is less than or equal to the sum of the individual effects, making these close to significant at conventional levels.

4.3 Impact on Communication and Discussion

In addition to increasing knowledge, Section 3 notes that a different potential channel through which financial education may operate is through increasing the efficiency of joint household decision-making by getting migrants and their family members to communicate more about finances. We examine this in Table 5. The first two columns look at how frequently migrant members communicate with their remaining family members – 52% of the control group talk at least once a week, and 79% at least once a month. None of the treatments have a significant impact on the frequency of communication, with the point estimates all small in magnitude.

Columns 3 to 5 of Table 5 then examine whether the treatments cause more discussion about savings, financial goals, and how to spend remittances. Although the point estimates suggest larger impacts from the combined treatment, none of them are statistically significant, and we cannot reject no change in such discussions. This continues to hold in column 6, where we aggregate several measures together. The evidence thus seems more consistent with a knowledge change than with a change in household communication and joint decision-making.

4.4 Impact on Real Outcomes: Remittances

As discussed in section 3, there are two main channels through which financial literacy training might be expected to impact on real outcomes for remaining household members: it may affect how much money they receive in remittances, and it may affect how households use the money that they do receive.

We start first with remittance behavior. Higher financial literacy may change the extent to which remittance transfers take place through the formal financial system. However, in the case of our Indonesian sample, almost all remittances occur through formal channels, and thus column 1 of Table 6 shows no impact on greater formality given this starting point. This is consistent with separate survey evidence from the Bank of Indonesia which has found most remittance transactions tend to occur through formal channels.

Financial literacy training may also change the frequency and amount remitted. Migrants may send more remittances if financial literacy training enables them to manage their money abroad better and have more savings, or if they feel that financial literacy training has improved their receiving household's financial management. A better understanding of the costs of remitting may reduce the frequency of remitting if migrants bundle transactions into fewer, larger, transfers in order to reduce transaction fees, or may increase the frequency of remitting if financially informed migrants are able to seek out cheaper methods for sending small transactions (Gibson et al., 2006; Aycinena et al., 2011).

Table 6 shows that financial literacy training had no significant impacts on the likelihood or frequency of remitting, or on the amount of remittances received. Moreover, the point estimates on the amount received are negative, suggesting that, if anything, households which took part in training received fewer remittances. These results are consistent with those of Gibson et al. (2014), who survey migrants and also find no impact of financial training on the amount of remittances sent. The lack of impact on remittances is not consistent with either a household desire to increase savings in the unitary household model, nor with financial education acting to increase the efficiency of joint decision-making in the non-unitary model.

Although there is no increase in the amount of remittances, it might still be the case that the existing levels of remittances are used differently by recipient households. We now turn to these compositional measures and first examine impacts on budgeting and financial planning at the household level, followed by impacts on savings and loan behavior.

4.5 Impact on Real Outcomes: Budgeting and Financial Planning

One of the key components of the financial literacy training for both migrants and households was the importance of maintaining financial records, budgeting, and setting financial goals. In Table 7, we examine impacts on these outcomes and find that the migrant-plus-family training results in a 9 percentage point significant increase in the likelihood of preparing cash records, positive but non-significant impacts on the likelihood of having financial goals, and a significant impact on the aggregate measure of budgeting and financial planning. Effect sizes are about half as large when only the family is assigned to training, although we cannot reject at the equality of the two treatments. Training only the migrant has no impact on any of the outcomes, and we can reject equality with the migrant-plus-family effect for the aggregate measure at the 5 percent level. Again we see the point estimates suggest complementarity of treatments for

several outcomes, with the difference between the combined effect and the sum of the individual treatment effects significant for discussing budgeting matters with the migrant, but not significant for other outcomes.

4.6 Impact on Real Outcomes: Savings and Loans

Finally, we examine impacts on savings and loan behavior in Table 8. In contrast to much of the existing financial literacy literature (e.g. Cole et al., 2011), which typically finds impacts of financial literacy training on knowledge, but not on ultimate outcomes, we find strong and statistically significant impacts of financial literacy training given to both the migrant and her family on savings behaviors and outcomes.

We find that households in this treatment group are 10 percentage points more likely to have saved in the past six months (column 1) and 11.5 percentage points more likely to say they will save in the next two months (column 2). Additionally, these households are 10.2 percentage points more likely to have a bank account (column 3). There is evidence of complementarities in treatment, with the combined effect on saving in the past six months significantly larger than the sum of the individual treatment effects ($p=0.029$), and at the threshold of standard significance levels for the effect on being likely to save in the next 2 months ($p=0.107$).

Next, we turn to saving amounts and present two measures of savings. The first is the average savings per month over the last 6 months, constructed by subtracting the average monthly expenditures from the average monthly income for each household; and the second is a direct measure of the total amount of remittance saved in the last 6 months. For this latter measure, we control for the time each migrant has been abroad, although reassuringly this variable is not correlated with any treatment status.

Figures 1 and 2 first show the distributions of both saving measures for all treatments combined and then separately for each treatment against control. Note that while there is a rightward shift in the distributions for the combined treatment (treatment C) when compared to the control group, the distributions do have wide variances with some strong outliers on both ends. Hence, prior to running regressions and in order to preserve zeros and negative values, we

transform the savings using the inverse hyperbolic sine transformation as suggested in Burbidge, et al. (1998). This transformation allows for both zeroes and negative values.[16]

We find that households where both the migrant and family members were treated have significantly higher monthly savings (column 4) and save almost twice as much of their remittances over the last 6 months than the control group (column 5). These effect sizes are large too, representing 0.2 and 0.3 standard deviation improvements, respectively. Aggregating the savings indicators together in column 6, we see a strong and statistically significant effect on the family of savings outcomes. Consistent with this higher savings, in column 9 we find that this treatment group is 8.9 percentage points less likely to have taken out a loan in the past six months.

The effect on overall savings outcomes of training both the migrant and their family member is significantly different from training either the migrant or the family member alone. Indeed, the impacts on all savings measures are insignificant and smaller in magnitude for the family-only training than the effects of the migrant-plus-family training. The impact of training the migrant alone on each savings outcome is likewise always statistically insignificant. For each savings measure the combined treatment has a point estimate greater than the sum of the individual treatment effects, suggesting complementarities, but larger standard errors mean these differences are not significant for the savings amount questions. Our overall aggregate savings measure has a p-value of 0.13 for the test of complementarities, again providing somewhat suggestive evidence for their existence.

4.6 Which Model are the Results Most Consistent With?

We find that it matters who is trained, with stronger impacts from training both the migrant and the remaining family members than training just either one. Moreover, there is some evidence for training complementarities, especially with regard to savings levels. Considering the different models outlined in Section 3, the fact that it matters who is trained seems inconsistent with a unitary model of decision-making with full information within the household. The fact that we see knowledge change, and budgeting practices and cash record-keeping change for the remaining family members, but no change in remittances or in communication within the household suggests that the main channel is likely to be through improvements in knowledge

[16] The transformation is $\log(y+(y^2+1)^{1/2})$.

allowing remaining family members in a non-unitary household model to better optimize their savings decisions. The results are less consistent with the training increasing the efficiency of joint decision-making or in increasing overall household returns to savings, since we would expect remittances to increase in these cases, and to see more communication within the household about financial topics.

This result may reflect a context in which the main financial decision-maker prior to migration is the person who migrates.[17] Frankenberg and Thomas (2003) report that couples in Indonesian households typically live in households where neither household member keeps money to him or herself, but where managing household expenses on food and routine household items is largely considered the wife's domain. In this context, if the female migrant had been the main decision-maker about general household expenditure before migrating, the remaining household members may not have as much experience with budgeting and savings, and this lack of experience combined with limited financial knowledge may have led to them not being able to save as much as optimal for them. Financial education may have helped overcome this constraint.

4.7 How Generalizable are these Results?

As with any randomized experiment, our results give the causal impacts of the program being studied in one particular context. However, the context of private regulated labor agencies selecting and placing workers abroad, and providing some training to them beforehand, is similar in a number of other countries to the process in Indonesia, suggesting that external validity is likely to extend beyond (the large number of) Indonesian migrants. In particular, the Philippines has long been a leader in regulated temporary labor migration, with its Government regulating that all workers must undertake a pre-departure orientation seminar before they leave, which includes some basic content on financial literacy. Sri Lanka, Nepal, India, and Bangladesh also are attempting to follow the Philippines and Indonesia in their regulation and processes of temporary migration, with significant numbers of women from these countries also migrating to work in similar jobs to those of the Indonesians in this study. The Gulf Cooperation Council (GCC) countries employ large numbers of migrants from these South Asian countries through

[17] The migrant is only the spouse of the household head 30% of the time, and is the daughter 41% of the time – it is unclear how involved adult daughters were in financial decision-making in their households, and the sample size is too small to examine impacts separately by relationship to the head.

this process, as do Singapore, Malaysia, Taiwan and Hong Kong. The type of migration studied here and the type of training being considered is thus of importance for the main migrant destinations outside of North America and Western Europe. In addition, almost all OECD countries have temporary migration programs in addition to their family and permanent work visa categories, with labor recruiters involved in placing workers in a number of these programs, and several Governments undertaking financial education efforts in this context, as noted in the introduction. Taken together, these facts suggest that the results of this impact evaluation are likely to be of general interest in a number of countries around the world.

5. Discussion and Conclusion

We have found that training both the migrant worker and their family member entrusted with receiving remittances and making household decisions on finances resulted in increased financial awareness and applied financial knowledge for these remaining household members. Training does not change either the frequency or amount of remittances received, but does change how households use this money. They are more likely to keep financial records, and as a result of these knowledge and behavior changes, accumulate more savings and rely less on loans. Training only the remaining family member has significantly smaller effects on knowledge, and result in less impact on savings, while training only the migrant does not have any significant impacts on the financial knowledge or savings outcomes of remaining family members.

The impacts we find are larger than has been found in two other recent randomized evaluations of financial literacy training related to savings or remittances in developing countries. Cole et al. (2011) found no significant average impact of financial literacy training on the likelihood of households opening a bank account in Indonesia, while Gibson et al. (2014) find that financial literacy training for migrants in the destination country lead to changes in financial knowledge, but no change in remitting behaviors. Seshan and Yang (2014) obtain results someway between those studies and ours, with no significant effects on savings and remittances in the full sample, but some impacts in a sub-sample of individuals with low baseline savings. Our results therefore raise the question of why effects are stronger in our context, and why they vary by treatment status.

A first potential explanation is differences in the intensity of the training. The training sessions in both Cole et al. (2011) and Gibson et al. (2014) were both approximately 2 hours in duration, while Seshan and Yang (2014) had 5 hours, compared to 18 hours for our migrant

training and 8 hours for the family member training. Certainly more hours offers more time for learning to take place, but the fact that our migrant training session was more than twice as long as the family member only training, yet resulted in no discernable changes for the family left behind suggests the intensity of the training cannot be the only explanation.

A second potential explanation lies in the timing of the training sessions. Our training sessions were timed at a moment where households were about to experience a large increase in the amount of financing coming into the household, and thus occurred at a "teachable moment", where households potentially had both the interest to learn about money management and the opportunity soon after to put what was learned into practice. In contrast, Gibson et al. (2014) worked with a sample of migrants already at destination, who may have already had time to establish routines and remitting behaviors[18], while Cole et al. (2011) worked with a general population who may have found it harder to put savings behaviors into practice given limited incomes and no change in the finances they had available. Given that international migration offers the possibility for households to dramatically increase their incomes, timing financial literacy training to occur right before this migration occurs and remittance flows start coming likely represents such a moment.

Finally, our results provide some suggestive evidence that there may be important complementarities occurring, since effects are not only strongest when both the migrant and their family member are trained, but are for some outcomes larger than the sum of the individual treatment effects. These complementarities are strongest for knowledge and savings, not for behaviors or financial discussions. Our theory therefore suggests they reflect remaining household members being able to better solve their saving optimization decision in the context of a non-unitary household model. One contextual issue to note is that our migrants are almost all female, and have typically been the ones mainly in charge of household spending decisions on day to day needs prior to migration. As such, the remaining family members may have less experience and skill at financial decision-making, and so training can especially help. This contrasts from other migration studies where the migrant is male, and his spouse is the one left behind, as in Seshan and Yang (2014). Examining impacts in other contexts with different types

[18] Although Seshan and Yang (2014)'s results do suggest it may be possible to change the routines of a subset of migrants who have been abroad for some time.

of migrants is an interesting area for future research, as is using larger samples to provide more precision in testing for these complementarities.

An important caveat to our results is that we only measure outcomes for the remaining household, not for the migrant herself. Nevertheless, the lack of a change in either the frequency of remitting or amount of remittances received means that any gains realized by the migrant are not resulting in higher incomes for their sending family over a two year period. It is of course possible that the migrants are saving more abroad, and bring this money back with them upon return. Measurement of migrant outcomes is thus an important area for further research. Since much of the existing policy focus in this area has been on providing financial education for migrants- either in pre-departure seminars or whilst they are abroad – our results suggest that policymakers aiming to enhance the developmental impact of remittances in sending countries should also test and explore more how to reach the families of migrants with financial literacy training.

References

Ambler, Kate 2013. "Don't tell on me: Experimental evidence of Asymmetric Information in Transnational Households", Mimeo.

Ashraf, Nava. 2009. "Spousal Control and Intra-Household Decision Making: An Experimental Study in the Philippines", *American Economic Review* 99(4): 1245-77.

Ashraf, Nava, Diego Aycinena, Claudia Martinez and Dean Yang. 2014 "Savings in Transnational Households: A Field Experiment among Migrants from El Salvador", *Review of Economics and Statistics,* forthcoming.

Aycinena, Diego, Claudia Martinez and Dean Yang. 2011 "The impact of remittance fees on remittance flows: Evidence from a field experiment among Salvadorean migrants", Mimeo. University of Michigan.

Benton, Marques, Stephen Meier, Charles Sprenger 2007. "Overborrowing and undersaving: lessons and policy implications from behavioral research", Federal Reserve Bank of Boston Paper 07-04.

Bertrand, Marianne and Adair Morse 2011. "Information disclosure, cognitive biases, and payday borrowing", *Journal of Finance,* 66(6): 1865-93.

Burbidge, John B., Lonnie Magee and A. Leslie Robb 1998, "Alternative Transformations to Handle Extreme Values of the Dependent Variable", *Journal of the American Statistical Association* , Vol. 83, No. 401 (Mar., 1988), pp. 123-127

Cai, Jing 2012 "Social networks, and the decision to insure: Evidence from randomized experiments in China", Mimeo. UC Berkeley.

Carpena, Fenella, Shawn Cole, Jeremy Shapiro and Bilal Zia. 2011. "Unpacking the causal chain of financial literacy", *World Bank Policy Research Working Paper no. 5798.*

Chandavarkar, AG 1980 "Use of migrants' remittances in labor-exporting countries", *Finance and Development* 17(2): 36-9.

Chen, Joyce 2013. "Identifying non-cooperative behavior among spouses: Child outcomes in migrant-sending households", *Journal of Development Economics* 100(1): 1-18.

Chin, Aimee, Leonie Karkoviata, and Nathaniel Wilcox, "Impact of Bank Accounts on Migrant Savings and Remittances: Evidence from a Field Experiment," mimeo, University of Houston, 2010.

Clemens, Michael A., Claudio E. Montenegro, and Lant Pritchett. 2009. "The Place Premium: Wage Differences for Identical Workers Across the U.S. Border." Center for Global Development Working Paper 148.

Connell, John 1980. "Remittances and rural development: migration, dependency and inequality in the South Pacific.", Occasional Paper no. 22, Australian National University Development Studies Centre.

Cole, Shawn, Thomas Sampson and Bilal Zia 2011. "Prices or Knowledge? What Drives Demand for Financial Services in Emerging Markets?", *Journal of Finance* 66(6): 1933-67.

Cox Edwards, Alejandra and Manuelita Ureta 2003. "International migration, remittances and schooling: evidence from El Salvador", *Journal of Development Economics*, 72, 2: 429-61.

De Laat, Joost 2008. "Household allocations and endogeneous information", Mimeo.

Durand, Jorge and Douglas Massey 1992. "Mexican migration to the United States: A critical review", *Latin American Research Review* 27: 3-42.

Fernandes, Daniel, John Lynch and Richard Netemeyer (2013) "Financial Literacy, Financial Education and Downstream Financial Behaviors", *Management Science,* forthcoming.

Frankenberg, Elizabeth and Duncan Thomas 2003. "Measuring Power", pp. 29-36 in Agnes Quisumbing (ed,) *Household Decisions, Gender and Development: A Synthesis of Recent Research.* International Food Policy Research Institute, Washington, D.C.

Gibson, John, David J. McKenzie, and Halahingano Rohorua 2006. "How cost elastic are remittances? Evidence from Tongan migrants in New Zealand" *Pacific Economic Bulletin* 21(1): 112-28.

Gibson, John, David McKenzie, and Bilal Zia. 2014. "The Impact of Financial Literacy Training for Migrants", *World Bank Economic Review*, 28(1): 130-161

Gine, Xavier, Dean Karlan and Muthoni Ngatia 2011. "Social networks, financial literacy, and index insurance", Mimeo. The World Bank.

Gine, Xavier, and Ghazala Mansuri 2012. "Money or Ideas? A Field Experiment on Constraints to Entrepreneurship in Rural Pakistan", Mimeo. The World Bank.

Government Accountability Office 2004 "The Federal Government's role in improving financial literacy: highlights of a GAO Forum", http://www.gao.gov/new.items/d0593sp.pdf [accessed April 20, 2012].

Hastings, Justine and Lydia Tejeda-Ashton 2008. Financial literacy, information, and demand elasticity: Survey and experimental evidence from Mexico. *NBER working paper no. 14538.*

Hugo, Graeme 2007. "Indonesia's Labor looks abroad", *Migration Information Source Country Profile* http://www.migrationinformation.org/Profiles/display.cfm?ID=594 [accessed 9 May, 2012].

Hugo, Graeme 2009. "Labour Migration for Development: Best Practices in Asia and the Pacific", ILO Asian Regional Programme on Governance of Labour Migration Working Paper no. 17.

Ignacio, Emilyzen and Yesenia Mejia 2009. "Managing labour migration: The case of the Filipino and Indonesian domestic helper market in Hong Kong", *ILO Asian Regional Programme on Governance of Labour Migration Working Paper no. 23.*

Inter-American Development Bank (IADB) 2004. *Sending Money Home: Remittance to Latin America and the Caribbean.* http://idbdocs.iadb.org/wsdocs/getdocument.aspx?docnum=547263

International Organization for Migration (IOM) *Labour Migration from Indonesia: An overview of Indonesian migration to selected destinations in Asia and the Middle East.* IOM: Jakarta. http://www.iom.int/jahia/webdav/shared/shared/mainsite/published_docs/Final-LM-Report-English.pdf [accessed 20 April 2012].

Karlan, Dean and Christopher Udry 2012. "Hoping to Win, Expected to Lose: Theory and Lessons for Micro Enterprise Development", NBER Working Paper no. 18325.

Lusardi, Anna Maria 2008. "Household Saving Behavior: The Role of Financial Literacy, Information, and Financial Education Programs", NBER Working Paper no. 13824.

Lusardi, Anna Maria and Olivia Mitchell 2006. "Financial Literacy and Planning Implications for Retirement Well-Being", Working Paper No. 1, Pension Research Council.

McKenzie, David 2012a. "Beyond baseline and follow-up: The case for more T in experiments", *Journal of Development Economics*, 99(2): 210-21

McKenzie, David 2012b. "Learning about migration through experiments", *CReAM Working Paper* no. 07/12.

Mohapatra, Sanket , Dilip Ratha and Ani Silwal 2011. "Outlook for Remittance Flows 2012-14", *Migration and Development Brief No. 17,* World Bank: Washington D.C.

Schaner, Simone 2013. "Do Opposites Detract? Intrahousehold Preference Heterogeneity and Inefficient Strategic Savings", Mimeo. Dartmouth.

Seshan, Ganesh and Dean Yang 2014. "Motivating migrants: A field experiment on financial decision-making in transnational households", *Journal of Development Economics,* forthcoming.

Woodruff, Christopher, and Rene M. Zenteno 2007. Migration networks and microenterprises in Mexico, *Journal of Development Economics*, 82(2): 509-28.

World Bank 2006. *Global Economic Prospects 2006: Economic Implications of Remittances and Migration.* World Bank: Washington, D.C.

World Bank 2010a. *Enhancing Access to Finance for Migrant Workers in Indonesia: Evidence from a survey of three provinces.* World Bank, Jakarta.

World Bank 2010b. *Improving Access to Financial Services in Indonesia.* World Bank, Jakarta.

Yang, Dean. 2008. "International Migration, Remittances, and Household Investment: Evidence from Philippine Migrants' Exchange Rate Shocks." *The Economic Journal,* 118: 591-630.

Table 1: Summary Statistics and Tests of Randomization

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
	Migrant-Only Training (A)	Family-Only Training (B)	Migrant and Family Training (C)	Control Group (D)	P-value A = B	P-value A = C	P-value A = D	P-value B = C	P-value B = D	P-value C = D	P-value A = B = C = D
Follow-up 1:											
Respondent is Female	0.34	0.31	0.31	0.36	0.612	0.573	0.848	0.952	0.484	0.450	0.839
Resondent Age	43.33	41.99	41.45	43.68	0.434	0.256	0.833	0.750	0.316	0.171	0.473
Migrant is his/her Spouse	0.17	0.16	0.15	0.24	0.900	0.646	0.251	0.739	0.205	0.111	0.424
Migrant is his/her Parent	0.36	0.36	0.39	0.31	0.968	0.712	0.398	0.684	0.424	0.227	0.660
Follow-up 2:											
Respondent is Female	0.36	0.36	0.37	0.38	0.990	0.934	0.796	0.945	0.807	0.864	0.994
Resondent Age	44.66	44.06	42.59	45.83	0.731	0.227	0.502	0.422	0.343	0.081 *	0.355
Migrant is his/her Spouse	0.18	0.17	0.17	0.25	0.927	0.877	0.193	0.949	0.167	0.154	0.444
Migrant is his/her Parent	0.36	0.35	0.32	0.29	0.889	0.581	0.332	0.681	0.410	0.688	0.763
Follow-up 3:											
Respondent is Female	0.38	0.35	0.38	0.38	0.762	0.985	0.909	0.780	0.678	0.895	0.979
Resondent Age	45.87	44.42	42.69	45.97	0.428	0.082 *	0.957	0.356	0.399	0.073 *	0.238
Migrant is his/her Spouse	0.17	0.17	0.17	0.23	1.000	0.978	0.323	0.978	0.323	0.317	0.704
Migrant is his/her Parent	0.33	0.35	0.28	0.3	0.759	0.477	0.595	0.311	0.403	0.854	0.723

This table presents demographic summary statistics for respondents in all follow-up survey rounds by treatment status -- Columns (1) - (4); as well as p-values for equality of means tests across treatments -- Columns (5) - (11). Statistically significant p-values are highlighted by: * (10% significance level), ** (5% significance level), and *** (1% significance level).

Table 2: Attrition Analysis

	(1)	(2)	(3)	(4)	(5)
	Present in Baseline	Present in Follow-up 1	Present in Follow-up 2	Present in Follow-up 3	Present in Any Follow-up Round
Migrant-Only Training (A)	-0.012	0.009	0.047	0.046	0.019
	(0.034)	(0.022)	(0.034)	(0.042)	(0.019)
Family-Only Training (B)	-0.034	0.019	0.046	0.074*	0.019
	(0.037)	(0.019)	(0.034)	(0.040)	(0.019)
Migrant and Family Training (C)	-0.045	0.008	0.014	0.032	0.019
	(0.039)	(0.022)	(0.038)	(0.044)	(0.019)
Sample Size	400	400	400	400	400
Mean of Dependent Variable in Control Group	0.942	0.971	0.913	0.875	0.971
Test: A-B = 0 (p-value)	0.562	0.579	0.965	0.422	0.983
Test: A-C = 0 (p-value)	0.400	0.968	0.322	0.735	0.977
Test: B-C = 0 (p-value)	0.792	0.557	0.345	0.261	0.994
Test: A = B = C = 0 (p-value)	0.679	0.783	0.564	0.490	1.000
Test: A + B = C (p-value)	0.995	0.487	0.100	0.121	0.430
Test: A + B > C (p-value)	0.497	0.757	0.950	0.940	0.785

This table presents attrition analysis for each survey round (baseline and three follow-ups) in Columns (1)-(4), and overall attrition in Column (5). Standard errors in parentheses, clustered at the individual level. The bottom half of the table presents p-values for equality of coefficient tests. Statistically significant coefficients are highlighted by: * (10% significance level), ** (5% significance level), and *** (1% significance level).

Table 3: Impact on Financial Knowledge

	(1)	(2)	(3)
	Financial Awareness	Applied Financial Knowledge	Financial Numeracy Skills
Migrant-Only Training (A)	0.039	0.009	0.016
	(0.038)	(0.018)	(0.026)
Family-Only Training (B)	0.123***	0.026	0.037
	(0.037)	(0.018)	(0.025)
Migrant and Family Training (C)	0.192***	0.049**	0.042
	(0.038)	(0.020)	(0.027)
R-squared	0.054	0.192	0.018
Sample Size	1132	1133	1133
Number of Clusters	394	394	394
Mean of Dependent Variable in Control Group	0.397	0.318	0.391
SD of Dependent Variable in Control Group	0.328	0.198	0.264
Test: A-B = 0 (p-value)	0.032	0.332	0.448
Test: A-C = 0 (p-value)	0.000	0.041	0.382
Test: B-C = 0 (p-value)	0.075	0.247	0.867
Test: A = B = C = 0 (p-value)	0.000	0.071	0.353
Test: A + B = C (p-value)	0.589	0.607	0.759
Test: A + B > C (p-value)	0.294	0.303	0.621

This table presents pooled regression analysis across three follow-up survey rounds for aggregated measures of Financial Awareness, Applied Financial Knowledge, and Financial Numeracy Skills in Columns (1), (2), and (3), respectively. Individual components of these aggregate measures are presented separately in Appendix Tables A2, A3, and A4. Separate regression analysis by follow-up survey round is presented in Appendix Table A5. All regressions include survey round dummies. Standard errors in parentheses, clustered at the individual level. The bottom half of the table presents p-values for equality of coefficient tests. Statistically significant coefficients are highlighted by: * (10% significance level), ** (5% significance level), and *** (1% significance level).

Table 4: Impact on Knowledge of Insurance and Remittance Costs

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Knowledge of Migrant Insurance	Prefers to Send One Large Remittance	Fixed Fee on Sender: Correct	Fixed Fee on Recipient: Correct	Exchange Rate Commission: Correct	Interest Rate: Correct	Knowledge of Remittance Costs: Aggregated
Migrant-Only Training (A)	0.057*	0.031	0.058	0.057	0.048**	-0.001	0.039
	(0.032)	(0.034)	(0.045)	(0.045)	(0.022)	(0.039)	(0.026)
Family-Only Training (B)	0.135***	0.030	0.087*	0.035	0.025	0.050	0.046*
	(0.036)	(0.036)	(0.045)	(0.046)	(0.021)	(0.040)	(0.026)
Migrant and Family Training (C)	0.256***	0.029	0.125***	0.069	0.047*	0.123***	0.079***
	(0.046)	(0.035)	(0.047)	(0.047)	(0.024)	(0.043)	(0.028)
R-squared	0.067	0.018	0.040	0.059	0.012	0.090	0.077
Sample Size	1059	1133	1133	1133	1133	1133	1133
Number of Clusters	384	394	394	394	394	394	394
Mean of Dependent Variable in Control Group	0.097	0.808	0.564	0.509	0.049	0.300	0.446
SD of Dependent Variable in Control Group							0.273
Test: A-B = 0 (p-value)	0.046	0.973	0.514	0.623	0.320	0.200	0.801
Test: A-C = 0 (p-value)	0.000	0.968	0.144	0.790	0.949	0.004	0.140
Test: B-C = 0 (p-value)	0.019	0.996	0.401	0.466	0.387	0.091	0.219
Test: A = B = C = 0 (p-value)	0.000	0.799	0.054	0.459	0.102	0.013	0.041
Test: A + B = C (p-value)	0.286	0.514	0.767	0.716	0.423	0.207	0.880
Test: A + B > C (p-value)	0.143	0.743	0.616	0.642	0.788	0.103	0.560

This table presents pooled regression analysis across three follow-up survey rounds for measures of knowledge of the insurance product for migrants and remittance costs. Column 7 is an aggregate measure of Columns (2)-(6). Separate regression analysis by follow-up survey round is presented in Appendix Table A6. All regressions include survey round dummies. Standard errors in parentheses, clustered at the individual level. The bottom half of the table presents p-values for equality of coefficient tests. Statistically significant coefficients are highlighted by: * (10% significance level), ** (5% significance level), and *** (1% significance level).

Table 5: Impact on Communication and Discussion

	(1)	(2)	(3)	(4)	(5)	(6)
	Migrant and Family Talk At Least Once a Week	Migrant and Family Talk At Least Once a Month	Migrant and Family Discuss Purpose of Savings	Migrant and Family Jointly Decide Financial Goals	Migrant and Family Jointly Decide How to Spend Remittances	Communication and Discussion on Financial Matters: Aggregated
Migrant-Only Training (A)	0.013	0.001	-0.020	0.033	-0.014	-0.000
	(0.051)	(0.045)	(0.043)	(0.044)	(0.046)	(0.036)
Family-Only Training (B)	0.019	-0.007	-0.003	0.056	0.019	0.024
	(0.051)	(0.045)	(0.045)	(0.043)	(0.049)	(0.037)
Migrant and Family Training (C)	0.019	0.022	0.047	0.066	0.026	0.047
	(0.050)	(0.045)	(0.049)	(0.047)	(0.049)	(0.041)
R-squared	0.003	0.013	0.007	0.004	0.025	0.007
Sample Size	1133	1133	1133	1133	1133	1133
Number of Clusters	394	394	394	394	394	394
Mean of Dependent Variable in Control Group	0.523	0.791	0.348	0.296	0.307	0.317
Test: A-B = 0 (p-value)	0.905	0.871	0.705	0.618	0.466	0.510
Test: A-C = 0 (p-value)	0.901	0.643	0.158	0.500	0.385	0.252
Test: B-C = 0 (p-value)	0.997	0.533	0.312	0.830	0.889	0.591
Test: A = B = C = 0 (p-value)	0.980	0.932	0.560	0.445	0.813	0.613
Test: A + B = C (p-value)	0.854	0.661	0.288	0.739	0.758	0.678
Test: A + B > C (p-value)	0.573	0.331	0.144	0.630	0.379	0.339

This table presents pooled regression analysis across three follow-up survey rounds for measures of communication and discussion between migrant workers and their familieis. Column (6) is an aggregate measure of Columns (3)-(5). All regressions include survey round dummies. Standard errors in parentheses, clustered at the individual level. The bottom half of the table presents p-values for equality of coefficient tests. Statistically significant coefficients are highlighted by: * (10% significance level), ** (5% significance level), and *** (1% significance level).

Table 6: Impact on Remittance Behavior

	(1)	(2)	(3)	(4)	(5)
	Receives Remittance through Informal Channels	Has Received Remittance	Remittance Frequency	Remittance: Log (Amount)	Remittance: Level (USD)
Migrant-Only Training (A)	-0.011	-0.011	-0.524	-0.379	-139.411
	(0.009)	(0.052)	(0.693)	(0.842)	(87.191)
Family-Only Training (B)	-0.010	-0.076	-1.019	-1.353	-135.704
	(0.009)	(0.053)	(0.678)	(0.867)	(89.502)
Migrant and Family Training (C)	-0.014	-0.034	-0.792	-0.580	-63.938
	(0.008)	(0.053)	(0.689)	(0.872)	(90.453)
R-squared	0.006	0.106	0.044	0.116	0.116
Sample Size	1131	1132	1131	1131	1130
Number of Clusters	394	394	394	394	394
Mean of Dependent Variable in Control Group	0.014	0.582	3.268	9.501	599.797
SD of Dependent Variable in Control Group				8.154	885.905
Test: A-B = 0 (p-value)	0.963	0.202	0.405	0.244	0.964
Test: A-C = 0 (p-value)	0.315	0.665	0.659	0.811	0.369
Test: B-C = 0 (p-value)	0.322	0.417	0.701	0.372	0.406
Test: A = B = C = 0 (p-value)	0.200	0.474	0.483	0.455	0.342
Test: A + B = C (p-value)	0.477	0.466	0.411	0.341	0.087
Test: A + B > C (p-value)	0.239	0.233	0.206	0.170	0.043

This table presents pooled regression analysis across three follow-up survey rounds for measures of remittance behavior. Column 4 is constructed in logs usiing the inverse hyperbolic sine transformation (Burbidge, et. al., 1998) of the remittance amount in USD dollars.

All regressions include survey round dummies, and control for the time period abroad for each migrant. Standard errors in parentheses, clustered at the individual level. The bottom half of the table presents p-values for equality of coefficient tests. Statistically significant coefficients are highlighted by: * (10% significance level), ** (5% significance level), and *** (1% significance level).

Table 7: Impact on Budgeting and Financial Planning

	(1)	(2)	(3)	(4)	(5)
	Had a Financial Goal in the last 6 Months	Plans to Have a Financial Goal in the next 2 Months	Discusses Budgeting Matters with Migrant	Prepares Cash Records	Budgeting and Financial Planning: Aggregated
Migrant-Only Training (A)	0.044	-0.023	-0.040	0.014	-0.001
	(0.047)	(0.034)	(0.040)	(0.024)	(0.025)
Family-Only Training (B)	0.052	0.033	-0.016	0.047*	0.029
	(0.045)	(0.037)	(0.040)	(0.027)	(0.026)
Migrant and Family Training (C)	0.055	0.060	0.025	0.091***	0.058**
	(0.048)	(0.039)	(0.040)	(0.030)	(0.026)
R-squared	0.064	0.096	0.005	0.015	0.025
Sample Size	1133	1133	1133	1133	1133
Number of Clusters	394	394	394	394	394
Mean of Dependent Variable in Control Group	0.526	0.226	0.767	0.059	0.395
SD of Dependent Variable in Control Group					0.248
Test: A-B = 0 (p-value)	0.855	0.107	0.561	0.221	0.248
Test: A-C = 0 (p-value)	0.821	0.024	0.108	0.011	0.030
Test: B-C = 0 (p-value)	0.956	0.498	0.306	0.171	0.298
Test: A = B = C = 0 (p-value)	0.594	0.112	0.432	0.015	0.093
Test: A + B = C (p-value)	0.538	0.338	0.155	0.446	0.420
Test: A + B > C (p-value)	0.731	0.169	0.077	0.223	0.210

This table presents pooled regression analysis across three follow-up survey rounds for measures of financial planning behavior. Column (5) is an aggregate measure of Columns (1) - (4). Separate regression analysis by follow-up survey round is presented in Appendix Table A6. All regressions include survey round dummies. Standard errors in parentheses, clustered at the individual level. The bottom half of the table presents p-values for equality of coefficient tests. Statistically significant coefficients are highlighted by: * (10% significance level), ** (5% significance level), and *** (1% significance level).

Table 8: Impact on Savings and Loans

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Has Saved in Last 6 Months	Will Save in Next 2 Months	Has a Bank Account	Average Monthly Savings: Log (Amount)	Total Remittances Saved: Log (Amount)	Savings Outcomes: Aggregated	Has Taken Loan in last 6 Months
Migrant-Only Training (A)	-0.005	0.006	0.054	0.436	0.567	0.035	-0.061
	(0.045)	(0.045)	(0.056)	(1.056)	(0.573)	(0.073)	(0.044)
Family-Only Training (B)	-0.021	0.026	0.038	1.286	0.360	0.032	0.043
	(0.046)	(0.045)	(0.055)	(1.116)	(0.532)	(0.072)	(0.047)
Migrant and Family Training (C)	0.101**	0.115**	0.102*	2.253**	1.468**	0.184**	-0.089**
	(0.050)	(0.050)	(0.056)	(1.016)	(0.614)	(0.073)	(0.045)
R-squared	0.019	0.034	0.015	0.014	0.043	0.028	0.015
Sample Size	1133	1133	1133	1133	1133	1133	1133
Number of Clusters	394	394	394	394	394	394	394
Mean of Dependent Variable in Control Group	0.324	0.369	0.397	6.566	1.894	-0.015	0.331
SD of Dependent Variable in Control Group				11.805	5.059	0.665	
Test: A-B = 0 (p-value)	0.723	0.641	0.775	0.427	0.722	0.964	0.025
Test: A-C = 0 (p-value)	0.029	0.025	0.410	0.062	0.173	0.050	0.515
Test: B-C = 0 (p-value)	0.013	0.068	0.259	0.347	0.077	0.043	0.005
Test: A = B = C = 0 (p-value)	0.065	0.085	0.337	0.113	0.120	0.064	0.021
Test: A + B = C (p-value)	0.058	0.213	0.900	0.720	0.525	0.264	0.269
Test: A + B > C (p-value)	0.029	0.107	0.450	0.360	0.262	0.132	0.866

This table presents pooled regression analysis across three follow-up survey rounds for measures of savings and loans. Column (6) is a z-score of Columns (1)-(5). Separate regression analysis by follow-up survey round is presented in Appendix Table A6. All regressions include survey round dummies, and additionally columns (5) and (6) control for the time period abroad for each migrant. Dependent variables in Columns (4) and (5) are constructed in logs usiing inverse hyperbolic sine transformation (Burbidge, et. al., 1998). Standard errors in parentheses, clustered at the individual level. The bottom half of the table presents p-values for equality of coefficient tests. Statistically significant coefficients are highlighted by: * (10% significance level), ** (5% significance level), and *** (1% significance level). Has saved in last 6 months is measured as for the last 4 months in the last of the 3 follow-up survey rounds.