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The Impact of Financial Literacy Training for Migrants

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Abstract

Remittances are a major source of external finance for many developing countries but the cost of sending remittances remains high for many migration corridors. International efforts to lower costs by facilitating the entry of new financial products and new cost comparison information sources rely heavily on the financial literacy of migrants. This paper presents the results of a

randomized experiment designed to measure the impact of providing financial literacy training to migrants. Training appears to increase financial knowledge and information seeking behavior and reduce the risk of switching to costlier remittance products. But it does not change either the frequency or level of remittances.

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The Impact of Financial Literacy Training for Migrants

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1. Introduction

International migration from a poor to a rich country is perhaps the single act most likely to succeed in dramatically increasing the income of an individual (e.g. Clemens et al. 2009; McKenzie et al. 2010) as well as that of family members remaining behind (e.g. Yang and Martinez 2005; Yang, 2008; Gibson et al. 2011). The most direct channel through which international migration can lower poverty for household members remaining in a developing country is through remittances. However, high costs of sending remittances limit the amount received by remaining household members from a given remittance transfer, as well as the incentives of migrants to send remittances if such transfers are effectively taxed by these high transactions costs. Lowering the cost of sending remittances has thus become one of the most discussed areas for policy intervention in recent years (see World Bank, 2006 and the United Nations Global Forums on Migration), in part because doing so is viewed as politically uncontroversial compared to efforts to increase the opportunities for migration.

Two of the main policies to lower the costs of remittances have been regulatory reform to allow the introduction of new financial products, and efforts to increase the disclosure of the costs of remitting via each product, pioneered by Mexico (www.remesamex.gob.mx) and the United Kingdom (www.sendmoneyhome.org¹). However the efficacy of policies to reduce the cost of remitting and spur competition by allowing new product entry and increasing disclosure of costs relies heavily on the abilities of migrants to understand how to use the different methods available for remitting and the costs implied by each method. While systematic evidence on the financial literacy of migrants is scarce, the data available suggest migrants often lack knowledge of the components of a remittance cost, the methods available, or how to compare methods (Gibson et al, 2006; 2007). There therefore seems to be promising scope for financial literacy training to change remitting behavior.

There is also growing interest from policymakers in providing financial literacy training in this area. Much of the focus on financial literacy training for migrants and their families has traditionally been on either integrating immigrants into the financial system in the destination

¹ This website has since expanded and changed name to www.fxcompared.com. The World Bank has also launched a remittance prices database (<http://remittanceprices.worldbank.org>) covering costs of remittances in 165 corridors.

country through content that focuses on building knowledge of banking services and covering basic household budgeting and savings topics (LIRS, undated), or content focused on encouraging remittance receivers to better use the money they receive, as is the focus in the content of the Microfinance Opportunities/Freedom from Hunger Global Financial Education Program.² However, a number of countries have also started focusing on teaching the migrants themselves more about the costs and details of different methods of remitting; including migrant sending countries like the Philippines and Indonesia, and pilot programs for seasonal migrants from the Pacific Islands working in New Zealand and Australia. However, to date there is no rigorous evidence on the effectiveness of such programs.

This paper presents the results of a randomized experiment designed to measure the impact of providing financial literacy training to migrants in New Zealand and Australia – countries which had recently launched a remittance cost comparison website (*www.sendmoneypacific.org*) for sending money to the Pacific Islands, and, in the case of New Zealand, where regulatory reform had led to the introduction of new remitting methods. The training taught migrants the different elements which make up the cost of sending remittances and how to compare costs across methods, explained how different methods of remitting work including alerting them to the presence of new methods, and also covered content on comparing costs of different methods of short-term credit financing for immigrants. The experiment was carried out on three different groups which had differing levels of existing education and financial knowledge, and differing intensities of remitting. The first group was Pacific Island migrants in New Zealand, who remitted relatively frequently and had relatively low education and financial literacy at baseline. The second group was East Asian migrants in New Zealand, who had low frequencies of remitting but relatively high education and financial literacy, and the final group was Sri Lankan migrants in Melbourne, Australia, who remitted relatively frequently and had relatively high education and financial literacy levels.

We find the training led to increases in financial knowledge of the Pacific Island and East Asian migrants, but not of the Sri Lankans, which is consistent with such training being most important for those with either low knowledge or low experience. This increased knowledge was

² <http://www.globalfinancialeducation.org/future.html#remittance>.

coupled with changes in behavior, with Pacific Island and East Asian migrants being more likely to use information to compare the costs of remitting across different methods, and the Pacific Island sample being less likely to switch remitting channels to methods which were not obviously better. However, we find no changes in the frequency of remitting, nor the amount remitted. The Pacific Island training also contained information on the costs of different forms of credit. This did not succeed in increasing use of credit cards from a low base, but did lead to an increase in hire purchase loans during a period when they were a relatively good deal, and to individuals setting up ROSCAs to avoid high interest payday loans. Unfortunately the comparison of the Pacific Island group with the other two groups is hampered by the fact that few of the East Asian sample regularly sent remittances, while attrition was high and unbalanced by treatment status for the Sri Lankan sample. The results are thus cleanest for the sample the content was developed for in the first place, the Pacific Island sample.

One implication of these results is that simply informing remitters about remittance costs, which is a relatively cheap and uncontroversial intervention, will not necessarily lower average costs from remitters switching to cheaper methods. Instead governments targeting reduced average money transfer costs may need to address other barriers, which may include excessive regulation and exclusive arrangements made by state-owned entities that deter new entry into remittance corridors.³ Another implication is that the case for providing financial literacy training for migrants needs to rest on other criteria than the financial savings from cheaper remittances, such as the improvements in their capabilities from being more informed customers and the potential savings from other aspects of financial management, such as choice of debt levels and instruments.

The remainder of the paper is as follows: Section 2 provides the background to the randomized experiment, in terms of the surveys and the financial literacy training that were carried out and the context of the remittance corridors studied. In Section 3 the results of the experiment are described, focusing on financial knowledge, information-seeking, remittance

³ For example, the New Zealand government-run bank with a mandate to serve low-income customers (*KiwiBank*) is not active in providing a remittance product for migrants. One likely reason is that *KiwiBank* branches are all in Post Offices, which already act as agents for an existing money transfer operator, Western Union.

frequency, amounts and methods, credit use, and qualitative evaluations from the study participants. Section 4 contains the discussion and Section 5 the conclusions.

2. Background Context, the Sample, and the Financial Literacy Intervention

The cost of remitting money has fallen dramatically in a number of migration corridors over the past 15 years due to increased competition, new product offerings, and the advent of price-comparison websites. For example, Profeco, Mexico's consumer protection agency, started reporting weekly the cost of sending money from several cities in the U.S. to Mexico in 1998, and Hernández-Coss (2005) reports that the cost of sending US\$300 fell from approximately US\$32 in 1999 to US\$12 by 2003, and by September 2011, one could send US\$300 for \$3.60 using Bank of America's account to account or cash to cash products.⁴

Nevertheless, costs of sending money are still high when sending along other migration corridors, with transfer costs between several African countries costing 15-20% on a US\$200 transaction in 2011.⁵ This was also the context in work that we did examining remittance costs in the Pacific in the mid-2000s, where we found the costs of sending money from New Zealand or Australia to several Pacific Islands was in the range of 15-20% on a typical NZ\$200 transaction (Gibson et al, 2006, 2007; McKenzie 2007). This work also revealed that while costs were high on average, there were lower cost possibilities available, such as the use of debit cards to make ATM withdrawals, which were not being used, and that few migrants had heard of such methods. Moreover, although a typical remittance transaction incurs both a fixed fee and an exchange rate commission, the latter component was often opaque, leading to migrants often comparing methods of remitting purely on the basis of the fixed fee component.

Spurred by these research findings, the New Zealand and Australian governments and their aid agencies, along with the World Bank, worked to try and lower the costs of remitting in the region. In New Zealand this resulted in a change in excessive anti-money laundering regulations, thereby allowing banks to give migrants an ATM card for themselves and one for their family back home without the bank having to verify the identity of the second card holder in person. Westpac Bank was the first to release a new product under these revised regulations,

⁴ <http://remittanceprices.worldbank.org/Country-Corridors/United-States/Mexico/> [accessed March 6, 2012].

⁵ <http://remittanceprices.worldbank.org>

with the Westpac Express pre-paid debit card targeted at migrants launched to positive reviews (Stock, 2009). Secondly, these organizations launched a new website for both Australia and New Zealand (www.sendmoneypacific.org), based on the successful *sendmoneyhome* website in the U.K. This website provides detailed information on the cost of sending remittances from Australia and New Zealand to the Pacific Islands by various channels, and is updated regularly.

However, despite the introduction of new products and a new information source, the take-up of the Westpac Express product and the volume of transfers using it have not been as high as hoped for (Pacific Islands Forum Secretariat, 2011). One plausible reason suggested for this was lack of financial literacy. Only 12 percent of Pacific Island migrants in our sample had heard of this card at baseline, and less than half of them had ever used any source of information to compare the costs of sending money across different methods. Coupled with increasing policy interest in providing financial education to migrants, we therefore decided to conduct a randomized experiment to measure the impacts of doing so on financial knowledge and remitting behavior of migrants.

2.1 The Sample

The Westpac Express card and *sendmoneypacific* were both designed for Pacific Island migrants in New Zealand. However, to examine whether training which focuses on understanding how to remit and to compare prices is also effective for other migrant groups, we decided to also consider other migrant groups. Since migrants are a rare population, especially when one focuses on migrants from specific countries, obtaining a representative sample can be prohibitively expensive (McKenzie and Mistiaen, 2009). We therefore decided to recruit study participants through intercept points where migrant populations are known to congregate, mimicking the approach that would typically be used by policymakers and financial institutions trying to reach migrant populations. This has the advantage of making our results relevant for the population most likely to be the subject of financial literacy efforts, even if it does not allow measurement of the impacts on migrants not found in these locations, who are typically less connected to their home countries (and less likely to remit).

Our first group consists of Pacific Islanders living in urban areas in the upper North Island of New Zealand. Approximately one-third of the recruitment was from attendees at a

Pacific cultural festival in Hamilton, which drew participants from up to 60 miles away (including South Auckland, which has the largest concentration of Pacific immigrants). The remainder was recruited from the main Pacific outdoor market (which operates every Saturday morning) in South Auckland, and from churches in Auckland and Hamilton. The church-based recruitment tended to bring in older participants whereas the cultural festival participants were typically in their twenties. The Pacific Islanders were predominantly (three-quarters) from Tonga, with the remainder born in Samoa, the Solomon Islands, Fiji, Australia and New Zealand. In the Pacific Island community, even second-generation migrants send remittances due to the on-going linkage with the extended families in the Islands (Lee, 2003) and so we did not rule out any New Zealand- or Australian-born participants.

The second group was chosen to be the other main immigrant group in New Zealand, East Asians. Chinese and Korean participants from Auckland (four-fifths of the total for the East Asian group) were recruited from five different churches, located in North, West and Central Auckland, and from a Tai Chi group and a Chinese health organization, both located in Northern Auckland. The remaining Chinese participants were from Hamilton (60 miles south of Auckland), where they were recruited from several churches and from pre-existing research networks of the Chinese team leader (who was based in Hamilton). In no case did any one church or locality contribute more than one-seventh of the sample. This sample was restricted to first-generation migrants.

The final group in our study consists of first-generation Sri Lankan migrants in Melbourne, Australia.⁶ They were recruited through snowball sampling. Initially, 20 people were selected from various Sri Lankan organizations (both formal and informal) in Melbourne. These organizations were selected to represent different demographic and economic groups, in terms of length of time residing in Australia, method of migration (skilled, family reunification, and student), education level, ethnicity (predominantly Sinhalese) and location in the greater Melbourne urban area. Each individual from these organizations was asked to provide names and contact details of five individuals who could be interviewed; out of the 100 potential participants identified this way, 80 on the seed list agreed to participate in the baseline survey. In turn, when

⁶ We also planned a sample of Pacific Island migrants in Sydney, Australia, but the field leader in charge of this process experienced health problems partway through the recruitment and training which led to this sample strata being dropped from the study.

the interviews were conducted with these 80 people, they were asked to provide further referrals, leading to another 129 people who were interviewed. Some of the participants who were obtained through the second round of referrals were uncomfortable with the questions on financial information and remittances, and refused to provide any contact addresses, which ruled them out from being invited to the training or participating in the four follow-up surveys.

In order to ensure that the surveys and the financial literacy training were conducted in the most effective and culturally appropriate way, we recruited individuals from these same migrant populations to lead the field work for each of the component studies. In fact each of these team leaders had a PhD, two in economics and one in psychology (but specializing in field studies of migrants), and so the level of training and skill for the providers of the financial literacy intervention is likely to be atypically high. Each of the team leaders recruited local assistants who were individuals drawn from the same population groups that were being studied. The questionnaires, powerpoint presentations and any written material handed out were available in English, Mandarin and Korean for the participants in the East Asian group, and in English for the Pacific and Sri Lankan groups (English is the language of schooling throughout the Pacific and the Sri Lankan group are highly educated even if English was not their first language).

2.2 Baseline Survey, Randomization, and Financial Literacy Levels

Respondents were recruited in December 2010-January 2011 (Pacific Island sample), December 2010-February 2011 (East Asian sample) and January-March 2011 (Sri Lankan sample). The resulting sample sizes were 349 Pacific Islanders, 352 East Asians, and 209 Sri Lankans. A baseline questionnaire collected information on their use and awareness of different remittance methods, their financial literacy, with specific emphasis on knowledge relevant to remittances and use of financial instruments, and their background characteristics.

Within each of the three samples we formed eight strata, based on three baseline characteristics: i) reported frequency of remitting (remitting at least every three months or not); ii) knowledge of the saving in transactions costs from bundling two remittances of \$100 into a single remittance of \$200; and iii) knowledge of which credit card user would face the highest finance charges based on different repayment patterns. Individuals were then randomized by

computer into a treatment group, which was invited to financial literacy training, and a control group, which was not.

Table 1 displays the baseline characteristics of each of the three samples by treatment status. For each sample an F-test cannot reject joint orthogonality, confirming that we did not get an unlucky draw and that randomization succeeded in achieving balance on baseline characteristics.

We see the three migrant groups differ from one another in a number of important ways. The Pacific Island migrants are younger and less educated than the other groups, with almost half aged under 35 and only 9 percent having a university degree. 39% are male, and just under half have a parent or child in a Pacific Island home country. They are relatively frequent remitters, with 59% remitting at least once every 3 months, with an mean remittance amount of NZ\$299 (US\$244) and median of NZ\$200. The East Asian migrants are older, with only one-third under 35, and more settled, with only one-quarter having immigrated in the past 5 years. 43% are male and 57% have university degrees. They are infrequent remitters, with only 6.5% remitting within the past 3 months, despite 66% having a parent or child remaining in the home country. The few remittances which do occur are for relatively large amounts, with a mean (median) of NZ\$4235 (NZ\$1000). The Sri Lankan migrants differ in being majority male (73%), and have the highest education and employment rates, with 59% having university education. They are also relatively frequent remitters, with 55% remitting at least every 3 months, and a mean (median) remittance of NZ\$1525 (NZ\$675), with 75% having a parent or child remaining in Sri Lanka. These differences across groups likely in part reflect the different immigration categories migrants entered through: Pacific Islanders tend to immigrate to New Zealand through family reunification and special concessionary migration quotas (McKenzie et al, 2010), whereas the Asian migrants to New Zealand typically entered through points systems that reward skills and wealth. The Sri Lankan migrants are typically individuals who entered Australia either as students or as a result of civil conflict in Sri Lanka, qualifying under Australia's points-based migration system.

The baseline survey asked three questions to measure remittance-specific financial literacy, as well as two questions on broader financial literacy related to credit (see Appendix 1).

Baseline financial literacy was lowest among the Pacific Island migrants: only 49% knew it was cheaper to bundle remittances as a single transaction than to send separately (and pay the fixed fee twice); only 5.7% knew that the prepaid ATM card was the cheapest method of remitting; and only 3% knew that the remittance fee consists of an exchange rate commission and a fixed fee. Knowledge of the available methods of remitting was also relatively low, as migrants were asked whether they had heard of each of 10 different methods of sending money (e.g. Western Union, Melie Mei Langi, Travellers Cheque, etc.) with the mean respondent having heard of only three such methods. Financial literacy related to credit was also relatively low, with only 41% knowing that someone who pays only the minimum payment would pay the most on credit card fees, and only 3% were able to correctly calculate the APR on a two-week payday loan.

Baseline financial literacy rates were higher among the Sri Lankans and East Asians, reflecting the much higher education levels and greater use of credit cards and cheque accounts. 65% of the East Asians and 78% of the Sri Lankans knew it was cheaper to bundle remittance transactions and over 40% of both groups were able to correctly calculate the APR on a two-week payday loan. However, knowledge of the components of a remittance fee was still low, with only 12% of the East Asians and 18% of the Sri Lankans knowing the correct answer to this question. As with the Pacific Islanders, these migrant groups only claimed to have heard of 3 or 4 possible ways of sending remittances out of a list of 10-12 methods.

2.3 Potential Savings from Greater Financial Literacy

The remittance methods available to the participants had transactions costs that ranged from almost zero to over 15 percent for a typical transaction at the start of the intervention. The greatest potential gains appear to be for the Pacific Island migrants in New Zealand, as a result of substantial heterogeneity in costs and lower typical remittance amounts. For example, at baseline, spending NZ\$200 (the median transaction) to send money to Tonga (the main destination) would attract transactions costs of 15 percent using a bank transfer, 11-12 percent using either Western Union or MoneyGram, eight percent using the major indigenous money transfer operator (Melie mei langi), or just five percent using the Westpac Express prepaid remittance card. Moreover, one internet-only provider (KlickEx) had transactions costs of less than one percent, although no participants had ever used this method. Since the most common

methods used were Western Union and Melie Mei Langi, bundling two transactions into one would save the fixed fee of NZ\$8-14, while switching from one of these methods to the Westpac Express Card would save NZ\$6-12 per \$200 transaction.

There was less variation in costs for the East Asians in New Zealand, and with few migrants remitting, less potential gains to be had. For money transfers to China, the transactions costs for sending NZ\$200 varied between 14 percent for both Western Union and the most expensive indigenous money transfer operator (Global FX) and 10 percent using the cheapest MTO (Convergence Group). Some of the Chinese money transfer operators would only transfer a minimum of NZ\$1000, for which the transactions costs were as low as 3 percent. Since the cost of remitting falls as a percentage of the amount remitted due to the fixed fee component, and the median amount remitted for the few East Asian migrants who were remitting was NZ\$1000 at baseline, the percentage cost of remitting ranged from 3-6 percent.

For the Sri Lankan participants in Australia, spending \$200 on a remittance would attract transactions costs of 16 percent using a bank transfer, 9 percent using Western Union, 5 percent using MoneyGram and just 3 percent using any of the cheapest indigenous money transfer operators (FastCash, Remittance Plus or Serandib). For their median remittance amount of A\$500 (NZ\$675), the transaction costs would range from 11 percent using a bank transfer, 5-6 percent using Moneygram or Western Union, 4 percent using Kapruka, and 3 percent using FastCash, Remittance Plus or Serandib. One money transfer operator who began after the intervention started, Cash Express, had costs for a A\$500 remittance of just 2 percent. Since the most common methods at baseline were Kapruka and FastCash, there were relatively limited gains to be had from switching providers for this sample.

2.4 The Financial Literacy Intervention

The financial literacy training content was originally developed by the authors in collaboration with the Ministry of Pacific Island Affairs and piloted on a Pacific Islands population in 2009. The material begins with a discussion of the different reasons people remit, and the different factors that enter into the choice of method of remitting, such as cost, speed, convenience to the sender and to the receiver, familiarity, trust, and other services also offered by the financial provider. The main focus is then on understanding the components of remittance costs, teaching

strategies for reducing these costs, and highlighting sources of information for comparing costs and learning about new remittance products. This included explaining the fixed fee and exchange rate commission components of the cost and illustrating how much they vary across different providers, showing how the transaction costs fall with the amount sent so that bundling smaller transactions into one large transaction saves costs, and providing information about the *sendmoneypacific* website for comparing costs and about the new Westpac direct debit card as a new product.

The remittance material was then adapted for the East Asian and Sri Lankan populations. Since *sendmoneypacific* doesn't cover remittance transactions for these remittance corridors, both groups were given instructions and shown how to get rates and the expected amount received on the Western Union website, plus ANZ Bank online and *fxcompared.com* for the Sri Lankans, and *MoneyBookers* for the East Asians in New Zealand.

Initially we had planned that the financial literacy training would focus just on remittances, but inspection of the baseline survey data from the Pacific Island group indicated that very few of the participants had credit cards, and a lack of awareness of this credit channel was corroborated by qualitative discussions with participants. For the Pacific Island group only, we therefore expanded the material covered in the financial literacy training to also include comparisons of sources of credit, especially in terms of their annual percentage rate of interest. The teaching material was based on examples of advertisements for payday lenders and other short term finance companies that used prominent sports stars to target Pacific Islanders (e.g. Figure 1a). The participants were taught how to calculate credit interest rates so that they could compare the annual cost of a payday or short-term loan or hire purchase with the cost of obtaining the same funds either as a cash advance or a purchase with a credit card.

The randomly chosen survey respondents were then invited to the financial literacy training sessions, which were held at multiple times and venues to ensure the maximum participation from those who were invited. These were typically held at churches, community centers, and sports clubs and were usually for groups of about 30 at a time and took about two hours. In addition to a presentation of about 25 powerpoint slides, written material was handed out and there was use of worked examples and continuous discussion with the community. As

noted above, the presenters were all members of the immigrant groups themselves, to break down any cross-cultural communication barriers. It was emphasized that the aim of the training was to not advocate for any one particular remittance provider but instead aimed to help the participants become more informed consumers who could shop around for better remittance deals (see Figure 1b as an example).

The attendance rate for the training session was 148/177 for the Pacific Island treatment group (84%), while 3 of the control group also attended (1.7%), accompanying friends in the treatment group. For the East Asian migrants, attendance was 112/179 (63%) in the treatment group, with 26/173 (15%) of the control group attending, who were friends from the same churches as treatment group participants. Among the Sri Lankans, the attendance rate was 60/107 (56%) for the treatment group, and none from the control group. All analysis will be based on intent-to-treat effects, using the random assignment to be invited to training.

2.5 Follow-up Surveys

At the end of each of the following 3 months after the financial literacy training, all respondents from the baseline survey were given a short follow-up survey on their remittance activity during the past month along with questions on major financial actions taken during the previous month, such as applying for a credit card. In addition, the one month survey also asked several financial literacy questions in order to measure whether financial knowledge had increased with the literacy training. Six months after training, all participants from both the treatment and control groups were invited back to community forums. A final round follow-up survey was conducted at the start of this forum, after which both treatment and control were given information on the main messages of the training course and information on new products and developments in the market that had occurred since the original intervention.

Table 2 shows the attrition rates by survey round and ethnic group sample. Attrition rates are lowest for the Pacific Island sample, averaging 5 percent at 1 month, 9-10 percent at 2 and 3 months, and 14 percent at 6 months. In no survey round can we reject balance between treatment and control groups. The East Asian sample has attrition rates of 9 percent at 1 month, 17 percent at 2 months, 23 percent at 3 months, and then 75 percent at 6 months, again balanced by treatment status. The Sri Lankan group had the highest attrition, with 45 percent of the treatment

group already attriting by month 1 compared to 29 percent of the control group, and 76 percent attrition in the 6 month follow-up. The high attrition was attributed by the survey leader to refusals to give contact details by some participants, along with discomfort discussing financial matters by some of the sample, which the invitation to the training may have exacerbated. Sri Lankans with lower education levels and with lower baseline financial literacy were more likely to attrit, although this differential attrition did not vary with treatment status. Despite the use of door prizes and gifts to their community groups, the 6 month attrition was so high in the East Asian and Sri Lankan groups since these surveys were done in the community events, which had very low attendance for this group.⁷ We therefore do not use the 6 month survey data for these two samples. Given these attrition rates, we view the evidence as most reliable for the Pacific Island group, and for the short-term outcomes for the East Asians.

3. Results

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

$$Outcome_{i,t} = a + b * Treat_i + c * Outcome_{i,0} + \sum_{s=1}^S \delta_s d_{i,s} + \varepsilon_{i,s} \quad (1)$$

where $Treat_i$ is a dummy variable indicating assignment to treatment, and we control for the lagged outcome variable where possible (McKenzie, 2011) and dummy variables, $d_{i,s}$ for randomization strata (Bruhn and McKenzie, 2009) in order to maximize power. Robust (White-corrected) standard errors are reported in parentheses under the coefficients in the tables.

3.1 Impact on Financial Knowledge

Table 3 examines whether the financial literacy training succeeds in increasing the knowledge migrants have about the costs of remitting and of using credit. We see large short-term impacts on financial knowledge for the Pacific Island sample – they are 16 percentage points more likely to know it is cheaper to bundle remittances into a larger transaction, 52 percentage points more likely to know the ATM/prepaid debit card is the cheapest method of remitting amongst the options asked about, 29 percentage points more likely to know that only paying the minimum on

⁷ The average value of gifts given to individuals (or the groups they represented) as a thank you for being involved and as incentives such as door prizes was US\$40 per participant. This incentive design plus all aspects of the study had received prior ethical approval from the Waikato Management School human ethics committee.

a credit card is more expensive than paying more than the minimum, and 29 percentage points more likely to know that payday loans are more expensive than credit cards or hire purchase. All of these impacts are significant at the 1 percent level, so as a result, the average knowledge score, which is a mean of these four questions, also shows a positive and significant effect. There is some suggestion of a decline in this knowledge on several questions at the 6 month follow-up survey, but even at 6 months migrants who were assigned to training are more likely to understand the exchange rate commission and to know that payday loans are more expensive than credit cards or hire purchase. Consistent with other studies of financial literacy (Carpena et al, 2011), we find no impact on computational measures of financial literacy such as the ability to correctly calculate the APR on a payday loan or to understand compound interest (which was not taught in the course).

We also see some increases in financial knowledge about remittances for the other two groups: East Asian migrants are 12 percentage points more likely to know that it is cheaper to bundle remittances into a larger transaction, and 10 percentage points more likely to know the cheapest method for remitting. Sri Lankan migrants saw an increase in knowledge of the cheapest method, but no increase (from a high base) in knowledge on remittance bundling. The Sri Lankan results should be caveated by the high and differential attrition rates. Recall that credit issues were not covered in the financial literacy training for the other two groups. Consistent with this, we find no increase in knowledge about credit among the East Asians (and the questions weren't asked in the Sri Lankan sample).

3.2 Impact on Information Seeking and Budgeting

Our follow-up surveys asked each month whether respondents had used any source of information to compare the costs of remitting across methods or products, and if so, what information source they had used. Since our intervention focused on the use of several internet comparison sites, we are particularly interested in whether participants use the internet more to compare remitting costs as a result of the intervention. Finally, our surveys at 1 month and 6 months also asked whether individuals always keep track of how much they spend each month. The financial literacy course made no mention of doing this, and we would thus not expect to see

effects. It therefore serves as a check on reporting bias, to ensure that individuals who attended training are not just reporting that they do more of every perceived desirable financial behavior.

Table 4 examines whether the increase in knowledge about the costs of remitting lead to changes in behavior. We see that in the short-term, assignment to training leads to the Pacific Island and East Asian migrants being more likely to use information to compare remitting costs, and to be more likely to use the internet to compare costs, with no impact on keeping track of monthly expenses. However, the strongest impacts are found in the month right after the training, with no impacts on the use of the internet at 3 or 6 months. The impacts are positive, but not statistically significant for the Sri Lankan sample, which may reflect imprecision due to the smaller sample size, or the impacts of differential attrition by treatment status, or perhaps that the effects are weaker for this group since the majority already used one of the cheapest methods anyway.

3.3 Impact on Remitting Frequency and Amount

Next we examine whether the financial literacy training had any impact on either the likelihood of sending remittances, or on the total amount remitted. Ex ante it is not clear what direction we should expect the effect of financial literacy training to be – the content on bundling transactions together into a few, less frequent, larger transactions would be expected to reduce the frequency of remitting while having no impact on the total amount sent, whereas content which stresses cheaper methods of remitting may lead individuals to be more willing to make smaller transactions and therefore increase frequency, and potentially also lead to individuals sending more remittances (Gibson et al, 2006; Aycinena et al, 2011).

Table 5 shows that the financial literacy training had no significant impacts on either the likelihood of remitting, or on the total amounts remitted for any of the three groups. Moreover, in some cases these are relatively precise zero effects. For example, averaging observations over all four follow-up surveys for the Pacific Island sample, the point estimate on the monthly frequency of remitting is -0.02, with a 95 percent confidence interval of (-0.077, +0.036). That is, we can rule out that the training had large positive effects on remitting frequency, and also rule out large negative impacts. Remittance amounts have more variation, but even so, we have a point estimate for the Pacific Island sample of an increase of NZ\$4, with a 95 percent confidence

interval of (-NZ\$63, +NZ\$71) for total remittances over 6 months – which is small both in absolute terms, and when compared to the median annual income of NZ\$20,000-30,000 for Pacific Islanders in our sample.

3.4 Impact on Remitting Channel

Even if immigrants do not change their frequency of remitting or the amount remitted, they may still benefit from the training if it causes them to change the method they use to remit. In Table 6 we examine whether migrants in our samples use a different method of remitting in any of the follow-up surveys to that which they had used in the 12 months prior to the baseline survey. We see that in the Pacific Island sample, 16 percent of the control group use a different method at least once during the four follow-up surveys, and financial literacy training leads to a significant reduction of this, halving the rate of switching to new products. Recall that the training introduced these migrants to a new product, the Westpac prepaid express card, but we see no increase in usage of this among those treated. Instead, the main effect appears to be fewer individuals switching from Western Union or Melie Mei Langi to use either Mana or Epokifo'ou, two less used methods. Mana is a church based money transfer method with a low fixed fee (\$5-8) but an unfavorable exchange rate, so that for the median remittance it is the most expensive of the money transfer operators. Moreover, Mana is not included on the *sendmoneypacific* website. Epokifo'ou is a money transfer organization which had very similar costs to Melie Mei Langi for much of our sample period, and which was slightly cheaper than Western Union. So the main effect seems to be to stop people from switching to methods which provide little or no benefit to switching, or for which it is less easy to track costs.

We find no significant impact on switching methods for the other two groups. For the East Asians, this in part reflects the low frequency of remitting overall, meaning that there are a small number of transactions to look at switching over. For the Sri Lankans, most immigrants were using a relatively cheap method at baseline, implying relatively little to be gained from switching (and also we have the caveat of high and unbalanced attrition).

3.5 Impacts on Credit

Finally we examine whether the credit portion of the financial literacy training led to individuals being more or less likely to have certain forms of credit in our final survey round. We restrict our analysis here to the Pacific Island sample, since the other two groups did not have credit covered in their financial literacy training, and because these other two groups had such high attrition in the final round survey.

Table 7 shows the credit impacts of the financial literacy training. We do not see any significant impacts on individuals having cheque accounts, savings accounts or ATM cards. Despite the emphasis in training on the Westpac prepaid card being the cheapest method to send, and credit cards being a cheaper source of financing, we do not see significant increases in usage of either. Despite (or perhaps as a result of) media coverage of the high cost of payday loans (e.g. Waikato Times, 2012) we find no one in our sample who said they had applied for a payday loan. This may be genuine, or reflect reluctance to admit use of this form of credit (Karlan and Zinman, 2008). What we do see are positive and significant impacts on obtaining hire purchase loans, and on other loans. Qualitative discussions reveal that the hire purchase loans were the result of special promotions before Christmas, in which special “zero interest rate” deals were coupled with free Christmas hams, possibly making these loans a good deal. The main other loans were extended family ROSCAs, which respondents said they had set up to avoid the high costs of payday loans. Taken together this suggests some potential positive impact of the training, although since we do not measure any reduction in use of other more expensive forms of credit, this use of cheaper forms of credit may lead to an increase in credit usage – which is of uncertain overall welfare effect.

3.6 What Do Participants Say the Main Benefits Have Been?

Individuals who attended training were asked in the one month follow-up whether it had been useful, whether they would recommend it to friends and family, what the most useful topic was, and whether they had changed behavior as a result. Among the Pacific Island group, all participants said it was very useful and that they would recommend it to others. The topic rated most useful was on the different costs and methods of sending money, with a number also mentioning information on credit cards as useful. Sixty percent of respondents said they had

changed behavior as a result, with the main change being the use of the website to compare costs, and asking around for better rates. For the East Asians, 80 percent of those attending said it was useful and 75 percent would recommend it to others, with the most useful knowledge being about remittance fees. Only 21 percent said they had changed behavior, mostly in terms of examining the costs of sending money. Among the Sri Lankan sample, 91 percent of those answering the follow-up survey said the training had been useful, but only 2 people in the Sri Lankan sample who had attended training said they had changed their behavior as a result. These direct reports are therefore consistent with the empirical results, suggesting that there was a knowledge increase, and some changes in information seeking behavior for the Pacific Island group in particular, but no big changes in remitting behavior.

4. Discussion

The training did succeed in increasing financial knowledge about the components of remittance costs, and in getting people to search for more information about the costs of sending money. It was fairly cheap to deliver – courses were typically taught in churches or other community spaces, and once the content was developed, the main costs were the time of the trainer, and snacks and refreshments for those attending – for an approximate cost of NZ\$20-30 per attendee. Given these low costs, the benefits observed in knowledge and behavior may be enough to justify providing this course.

Nonetheless, despite the emphasis on the Westpac prepaid debit card as the lowest cost of remitting, and credit cards as a low cost of obtaining credit for the Pacific Island sample, we do not see any impact on these outcomes. The final round survey asked people why they were not using the cheapest method of remitting, and 41 percent replied that another method was more convenient for them, and 55 percent that another method was more convenient for the receiver. The latter is consistent with Gibson et al. (2007), who show the geographic spread of ATM facilities in Tonga covers a lower share of the population than Western Union offices. Further evidence of the lack of take-up of low cost technologies in the Pacific Islands comes from two other methods: the internet-only money transfer operator *KlickEx* had the lowest costs overall but was unused by participants throughout our study, and in October 2011, *KlickEx* linked with a major mobile phone provider, *Digicel*, to offer remittance transfers into a mobile wallet in

Tonga, Samoa or Fiji which could then be withdrawn as cash, again at very low transaction costs. To date this new method seems to have very low take-up.

One reason that convenience may win out is that the amounts saved through better financial literacy may just be too trivial to warrant action. This is especially the case for the East Asians (who tend not to remit that much, and when they do, remit large amounts), and the Sri Lankans (who were using cheap methods to start with). But even for the Pacific Island sample, the savings from switching to one of these cheapest methods might amount to NZ\$6-12 per \$200 transaction, which may only merit the costs of learning a new method and trying it out if people remit very frequently. Given that the baseline survey revealed an average frequency of remitting for the Pacific Island sample of five times per year, the annual saving from switching to the cheapest methods is just NZ\$30-60. The scope for changes in ultimate outcomes may be greater for financial literacy transactions which focus more on savings and budgeting behavior, or those which allow people at risk of obtaining expensive credit to avoid very expensive loans (e.g. Bertrand and Morse, 2011).

5. Conclusions

Our results show that simple financial education training for migrants can change their knowledge about the costs of remitting and lead them to look around more at prices. There is also some suggestive evidence from the Pacific Island sample that coupling this with information on different sources of credit may help migrants to avoid some of the most expensive forms of credit. Nevertheless, we find no big changes in ultimate outcomes – migrants avoid switching to more expensive or less transparent remittance channels, but do not change the amount or frequency of remitting.

Thus despite simply informing remitters about remittance costs being a relatively cheap and uncontroversial intervention, it will not necessarily lower average costs from remitters switching to cheaper methods. Instead governments targeting reduced average money transfer costs may need to address other barriers, which may include excessive regulation and exclusive arrangements made by state-owned entities that deter new entry into remittance corridors, and barriers to access of financial access on the receiving country side. It is also possible that the mere process of providing transparent information on the costs of remitting by different methods

will lower costs through competition, without migrants needing to switch providers. For example, transfer fees from New Zealand to the Pacific Islands have fallen since the launch of *sendmoneypacific*, although how much can be attributable to the website rather than other market events is an open research question.

As far as financial education itself though, a further implication of this work is that the case for providing financial literacy training for migrants needs to rest on other criteria than the financial savings from cheaper remittances, such as the improvements in their capabilities from being more informed customers, and the potential savings from other aspects of financial management, such as choice of debt levels and instruments. Experimenting further with adding additional content on budgeting, saving, and debt management seem fruitful areas for policy refinement in this area.

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Appendix 1: Baseline Financial Literacy Questions (Pacific Island version)

Remittance-specific measures:

In your opinion, which of the following methods is the cheapest way of sending NZ\$200 to someone in the Pacific Islands?

- a) Western Union
- b) Bank transfer through ANZ or Westpac
- c) Melie Mei Langi or Samoa Money Transfer
- d) ATM card or Visa prepaid card
- e) Other (specify)_____

When money is sent by someone in New Zealand to people in the Pacific Islands, what are the various costs that the bank or money transfer operator charges? (tick all that apply)

- a) A fixed fee imposed on the sender
- b) A fixed fee imposed on the recipient
- c) An exchange rate commission
- d) All of the above
- e) None of the above
- f) Don't know

Suppose you want to send NZ\$200 to someone in the Pacific Islands. Which would cost you more, sending it all at once as \$200, or sending it at two different times of \$100 each time, or is the cost the same either way?

- a) Cheapest to send \$200 all at once
- b) Cheapest to send \$100 two times
- c) The same cost either way
- d) I don't know

General Financial Literacy

In your opinion, which one of the following credit card users is likely to pay the GREATEST dollar amount in finance charges per year, if they all charge the same amount per year on their cards?

- a) Semisi, who pays at least the minimum amount each month, and more when he has the money
- b) Samisoni, who only pays the minimum amount each month
- c) Sione, who always pays off his credit card in full shortly after he receives it
- d) Tevita, who generally pays off his credit card in full, but occasionally will pay the minimum when he is short of cash.

A consumer takes out a payday loan for \$100 which has a \$15 fee. After 2 weeks, the consumer pays back the full \$115. What do you think is the annual percentage rate (APR) charged on this loan?

- a) 15%
- b) 115%
- c) 315%
- d) 390%

Figure 1: Examples of the Materials Used in the Financial Literacy Training

Example interest rates from finance companies and pay day loans

**Need a loan?
Talk to the team.**

Loan Examples per week from:

- \$1,000 @ \$28.41 for 52 weeks
- \$5,000 @ \$71.42 for 104 weeks

**\$200 to \$20,000
one hour approval
Cash Loans**

Stacey Jones - Kiwi Legend

0800 760 000

if. INSTANT FINANCE
www.instantfinance.co.nz

Pay day loans for shorter periods are even more costly than the Instant Finance example

E.g. to borrow \$1000 from “Cash in a Flash” and pay back two weeks later, would have to repay \$1224

The interest cost for two weeks is \$224 (APR is 600 percent!)

If the same amount was borrowed as a cash advance from a credit card and repaid in two weeks, the interest cost would be only about \$20

Using a pre-paid card or ATM card may make a big difference



Table 1: Characteristics of Sample by Treatment Status

	Pacific Islanders in New Zealand		East Asians in New Zealand		Sri Lankans in Australia	
	Treatment	Control	Treatment	Control	Treatment	Control
<i>Variables Stratified on</i>						
Remit at least every 3 months	0.59	0.59	0.08	0.05	0.54	0.56
Knows it is cheaper to bundle remittances into large transaction	0.49	0.49	0.64	0.65	0.78	0.78
Knows only paying minimum on credit card costs the most	0.41	0.41	0.55	0.54	0.44	0.44
<i>Personal Characteristics</i>						
Male	0.36	0.42	0.45	0.41	0.76	0.69
Age is under 35	0.47	0.49	0.33	0.33	0.28	0.30
First generation migrant	0.81	0.81	0.99	0.98	1.00	0.99
Migrated within last 5 years	0.34	0.35	0.25	0.27	0.47	0.41
Has a parent or child in the origin country	0.47	0.42	0.69	0.64	0.75	0.76
Married	0.69	0.65	0.69	0.70	0.84	0.93
Education of Fifth Form (10th grade) or less	0.46	0.39	0.09	0.11	0.01	0.02
University degree	0.10	0.08	0.59	0.54	0.64	0.54
Employed	0.63	0.59	0.42	0.47	0.81	0.80
Uses email at least weekly	0.31	0.33	0.59	0.56	0.73	0.79
<i>Financial Characteristics</i>						
Ever compared costs of sending remittances	0.48	0.47	0.40	0.41	0.62	0.59
Has a cheque account	0.35	0.33	0.56	0.58	0.79	0.75
Has an ATM card	0.80	0.76	0.80	0.76	0.88	0.85
Has a Credit card	0.15	0.16	0.64	0.60	0.76	0.72
Last amount remitted conditional on remitting (NZD)	288	310	4235	4234	1200	1884
Gets APR on 2 week loan correct	0.02	0.03	0.44	0.47	0.42	0.41
Knows components of a remittance fee	0.03	0.02	0.13	0.11	0.20	0.15
Number of methods for sending remittances known	3.00	2.83	2.63	2.69	3.68	3.64
Sample Size	177	172	179	173	107	102
P-value for test of joint orthogonality:		0.913	0.978	0.356		

Table 2: Attrition rates by Survey Round

	1 month	2 months	3 months	6 months
Pacific Islanders in New Zealand				
Treatment Group	0.06	0.09	0.09	0.16
Control Group	0.05	0.09	0.10	0.13
p-value of equality	0.673	0.886	0.814	0.415
Asians in New Zealand				
Treatment Group	0.10	0.18	0.25	0.74
Control Group	0.08	0.16	0.20	0.76
p-value of equality	0.359	0.526	0.228	0.547
Sri Lankans in Australia				
Treatment Group	0.45	0.45	0.44	0.79
Control Group	0.29	0.30	0.32	0.72
p-value of equality	0.017	0.025	0.073	0.194

Table 3: Impact on Financial Knowledge

Time after intervention:	Knows it is cheaper to bundle remittances		Knows cheapest method	Knows paying only minimum on credit card expensive		Knows Payday loan expensive		Average Knowledge Score	Knows about exc. Rate commission	Calculates APR correctly	Understands Compound Interest
	1 month	6 months	1 month	1 month	6 months	1 month	6 months	1 month	6 months	6 months	6 months
Panel A: Pacific Island Migrants in New Zealand											
Assigned to Treatment	0.160*** (0.0487)	0.0682 (0.0484)	0.532*** (0.0440)	0.289*** (0.0531)	0.0503 (0.0508)	0.289*** (0.053)	0.159*** (0.0567)	0.320*** (0.0377)	0.214*** (0.0546)	0.0114 (0.0277)	-0.0241 (0.0332)
Observations	328	302	323	329	299	329	300	330	296	299	301
Control group mean	0.53	0.54	0.13	0.31	0.32	0.31	0.35	0.32	0.25	0.06	0.11
Panel B: Asian Migrants in New Zealand											
Assigned to Treatment	0.125*** (0.0477)		0.0988** (0.0401)	-0.00592 (0.0438)		-0.056 (0.057)		0.051* (0.0268)			
Observations	321		308	304		288		323			
Control group mean	0.68		0.10	0.19		0.65		0.42			
Panel C: Sri Lankan Migrants in Australia											
Assigned to Treatment	-0.00802 (0.0522)		0.184*** (0.066)								
Observations	131		131.00								
Control group mean	0.86111		0.67								

Notes:

Robust standard errors in parentheses, *, ** and *** indicate significance at the 10, 5 and 1% levels respectively.

All regressions include controls for strata dummies, and for baseline outcome where available.

Six month follow-up results only shown for the Pacific Island sample due to extreme attrition in other samples.

Sri Lankan 1 month follow-up survey didn't ask questions on credit card or payday loan knowledge

Table 4: Impact on Financial Behavior

	Used information to compare remitting costs					Used internet to compare remitting costs					Keeps track of monthly spending	
	1 month	2 months	3 months	6 months	Average	1 month	2 months	3 months	6 months	Average	1 month	6 months
Panel A: Pacific Island Migrants in New Zealand												
Assigned to Treatment	0.206*** (0.0428)	0.0289 (0.0490)	-0.0576 (0.0460)	0.0975* (0.0513)	0.0720** (0.0357)	0.188*** (0.0430)	0.155*** (0.0501)	-0.00212 (0.0536)	-0.0350 (0.0484)	0.0822** (0.0365)	-0.0466 (0.0414)	0.000522 (0.0478)
Observations	329	318	316	302	332	330	321	317	302	332	308	283
Control Group Mean	0.60	0.68	0.80	0.58	0.66	0.20	0.31	0.40	0.31	0.30	0.61	0.56
Panel B Asian Migrants in New Zealand												
Assigned to Treatment	0.0977** (0.0480)	0.0372 (0.0474)	0.0827* (0.0467)		0.104*** (0.0350)	0.0396 (0.0442)	0.0515 (0.0325)	0.0269 (0.0330)		0.0582** (0.0255)	-0.0915 (0.0564)	
Observations	318	291	272		320	321	293	274		323	282	
Control Group Mean	0.23	0.20	0.14		0.18	0.18	0.06	0.06		0.10	0.63	
Panel C Sri Lankan Migrants in Australia												
Assigned to Treatment	0.0528 (0.0796)	0.0387 (0.0757)	0.0137 (0.0690)		0.0344 (0.0583)	-0.0119 (0.0529)	-0.0385 (0.0407)	-0.0105 (0.0368)		-0.00400 (0.0331)		
Observations	129	128	127		130	131	130	129		132		
Control Group Mean	0.24	0.20	0.16		0.20	0.10	0.07	0.04		0.07		

Notes:

Robust standard errors in parentheses, *, ** and *** indicate significance at the 10, 5 and 1% levels respectively.

All regressions include controls for strata dummies, and for baseline outcome where available.

Note averages are over 1-3 months for Asians and Sri Lankans and 6 month impacts not shown due to extreme attrition in this round.

Table 5: Impacts on Remittance outcomes

	Made a Remittance in Past Month					Total Amount Remitted (Unconditional)				
	1 month	2 months	3 months	6 months	Average	1 month	2 months	3 months	6 months	Total
Panel A: Pacific Island Migrants in New Zealand										
Assigned to Treatment	-0.0110 (0.0383)	-0.0585 (0.0377)	-0.0550 (0.0350)	0.0435 (0.0443)	-0.0210 (0.0288)	12.33 (9.534)	-2.839 (6.038)	-0.903 (5.549)	-6.185 (16.89)	3.946 (34.09)
Observations	328	316	317	299	332	321	310	308	292	278
Control Group Mean	0.16	0.17	0.14	0.18	0.16	20	22	16	53	115
Panel B: Asian Migrants in New Zealand										
Assigned to Treatment	0.00224 (0.0309)	0.0104 (0.0230)	-0.0143 (0.0185)		0.00127 (0.0182)	-172.7 (160.9)	292.2 (224.6)	-172.1 (143.5)		81.21 (314.4)
Observations	321	293	274		323	316	290	271		269
Control Group Mean	0.088	0.041	0.029		0.054	352	62	193		523
Panel C: Sri Lankan Migrants in Australia										
Assigned to Treatment	-0.0352 (0.0777)	0.0949 (0.0796)	-0.0764 (0.0782)		-0.00451 (0.0610)	-456.7 (329.0)	-163.2 (135.1)	-60.10 (51.23)		-469.1 (371.1)
Observations	131	130	129		132	130	129	128		126
Control Group Mean	0.361	0.282	0.319		0.326	630	361	144		868

Notes:

Robust standard errors in parentheses, *, ** and *** indicate significance at the 10, 5 and 1% levels respectively.

All regressions include controls for strata dummies, and remittance amount regressions also include baseline amount remitted.

Six month follow-up results only shown for the Pacific Island sample due to extreme attrition in other samples.

Table 6: Impact on the Likelihood of Switching Remittance Methods

	1 month	2 months	3months	6 months	Ever Switch	Ever use Mana/Epokifo'ou	Ever use Westpac card
Panel A: Pacific Island Migrants in New Zealand							
Assigned to Treatment	-0.0380 (0.0264)	-0.0645** (0.0280)	-0.0675** (0.0271)	-0.0118 (0.0200)	-0.0865** (0.0340)	-0.0499** (0.0245)	0.00598 (0.0161)
Observations	329	318	316	299	332	332	332
Control group mean	0.08	0.10	0.10	0.04	0.16	0.079	0.018
Panel B Asian Migrants in New Zealand							
Assigned to Treatment	-0.0123 (0.0154)	-0.00563 (0.0110)	0.000445 (0.0114)		-0.0240 (0.0195)		
Observations	321	293	274		323		
Control group mean	0.03	0.01	0.01		0.04		
Panel C: Sri Lankan Migrants in Australia							
Assigned to Treatment	0.00714 (0.0494)	0.0849 (0.0589)	-0.00737 (0.0502)		0.0997 (0.0711)		
Observations	131	130	129		132		
Control group mean	0.09722	0.070422	0.0869		0.15277		

Notes:

Robust standard errors in parentheses, *, ** and *** indicate significance at the 10, 5 and 1% levels respectively.

All regressions include controls for strata dummies.

Six month follow-up results only shown for the Pacific Island sample due to extreme attrition in other samples.

Table 7: Impact on Pacific Island migrants having different financial products 6 months after treatment

	Cheque Account	Savings Account	ATM card	Westpac Card	Credit Card	Hire Purchase Loan	Payday Loan	Other Loan
Assigned to Treatment	-0.0273 (0.0551)	0.0674 (0.0469)	0.000609 (0.00894)	0.0179 (0.0189)	-0.0336 (0.0413)	0.0867*** (0.0315)	0 (0)	0.168*** (0.0376)
Observations	317	317	317	317	317	317	317	317
Control group mean	0.397	0.737	0.994	0.019	0.179	0.045	0.000	0.051

Notes:

Robust standard errors in parentheses, *, ** and *** indicate significance at the 10, 5 and 1% levels respectively.

All regressions include controls for strata dummies.