

November 14, 2006

Efficient Financial Services for Development in the Pacific

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Working Paper #2 Pasifika Interactions Project

Abstract

Capital inflows to the Pacific Islands from aid, foreign direct investment and remittances are an important source of development finance. Remittances are the fastest growing of these three capital sources and now total NZ\$600 million per year from all sources. Remittances can be expected to grow even further as short-term labour mobility is used as a mechanism to deal with seasonal labour shortages in New Zealand and limited job opportunities in the Pacific. However the transactions costs of sending remittances to the Pacific Islands are very high for the most widely used methods. This paper examines the New Zealand – Tonga remittance corridor, where typical transactions involve transfers of about NZ\$200, with costs in the order of 15-20 percent for bank drafts and money transfer companies like Western Union. Cheaper transfer methods using Automatic Teller Machines (ATMs) are feasible and have transactions costs of less than five percent but are not widely used. This ten percentage point spread between the most popular and the cheapest remittance methods means a potential loss for Tonga equivalent to four percent of GDP. Extrapolating from this remittance corridor to the rest of the Pacific, avoidable transactions costs may total NZ\$60 million per year for remittances from all sources. Several hypotheses about the continued reliance on high transactions costs methods are examined and the implications for public policy are discussed.

JEL: F22, O15

Keywords: Remittances; Transactions Costs; Pacific Islands

Acknowledgements:

I am grateful to David McKenzie, Halahingano Rohorua, and Geua Boe-Gibson for permission to report some of our jointly conducted research in this paper. The survey data used here were originally funded by the World Bank, the Waikato Management School and Marsden Fund grant UOW0503 and this funding is gratefully acknowledged. Assistance with data from the Ministry of Lands, Surveys and Natural Resources, the Statistics Office of Tonga, and survey respondents is also gratefully acknowledged. All errors and omissions are the responsibility of the author.

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I. Introduction

Most poor people around the world lack access to competitive and efficient financial services. Very few benefit from a savings account, insurance, loan, or convenient and cheap way to transfer money. As Helms (2006, p. 1) notes:

“Financial services for the poor, often referred to as microfinance, cannot solve all the problems caused by poverty. But they can help put resources and power into the hands of poor and low-income people themselves, letting them make those everyday decisions and chart their own paths out of poverty.”

While finance for economic development was traditionally viewed in more aggregate ways, with large aid-financed transfers to state-run development banks, recent years have seen an emphasis placed on financial flows at household and individual level. This reflects the fact that market failures, in the form of informational asymmetries, and high transactions and contract enforcement costs, are particularly binding on poor or small entrepreneurs who lack collateral, credit histories, and connections (Beck, Demurgic-Kunt and Peria, 2006).

One of the main sources of these micro-level financial flows is from migrants, who worldwide remit billions of dollars back home. These remittances have risen rapidly and now exceed the amount of money that developing countries receive as foreign aid (Ratha, 2003). These remittances are especially important for Pacific Island countries, for example, they comprise 39 percent of Tongan Gross Domestic Product (World Bank, 2006). While aid is still more important in the aggregate in the Pacific Islands (see Section 2) remittances are growing faster than either aid or foreign direct investment and now total NZ\$600 million per year. Remittances can be expected to grow even further as short-term labour mobility is used as a mechanism to deal with seasonal labour shortages in New Zealand and limited job opportunities in the Pacific (World Bank, 2006a; Benson-Pope and Cunliffe, 2006).

However the transactions costs of sending remittances to the Pacific Islands are very high for the most widely used methods. Thus, just as taxpayers and donors to development charities in developed countries would like aid spending to be efficient in achieving its development goals,² so too would remitters like efficient financial services that deliver as much as possible of their remittance to the intended recipients. The issue of transactions costs matters because of their wide variation – if all feasible methods of remitting to the Pacific were equally costly there may be little scope for public policy to reduce costs. However, according to estimates by Gibson, McKenzie and Rohorua (2006), the transactions costs on money transfers from New Zealand to Tonga range from 15-20 percent when sending bank drafts or using money transfer companies like Western Union but are only four percent when the recipient uses an Automatic Teller Machine (ATM) to withdraw funds from an account set up by the remitter.

This spread of at least ten percentage points between the most popular and the cheapest remittance methods means a potential loss for Tonga of up to four percent of GDP (given that remittances are 39 percent of GDP) from having remittances sent through costly rather than cheap channels. Such a calculation assumes that remitters would continue sending the same amount so that recipients benefit from lower transactions costs in the form of larger net receipts. It is possible that instead, remitters might send less so that recipients receive the same net amount, although the survey evidence reported by Gibson, McKenzie and Rohorua (2006) suggests that this response is unlikely. Moreover, even if remitters did send less, the

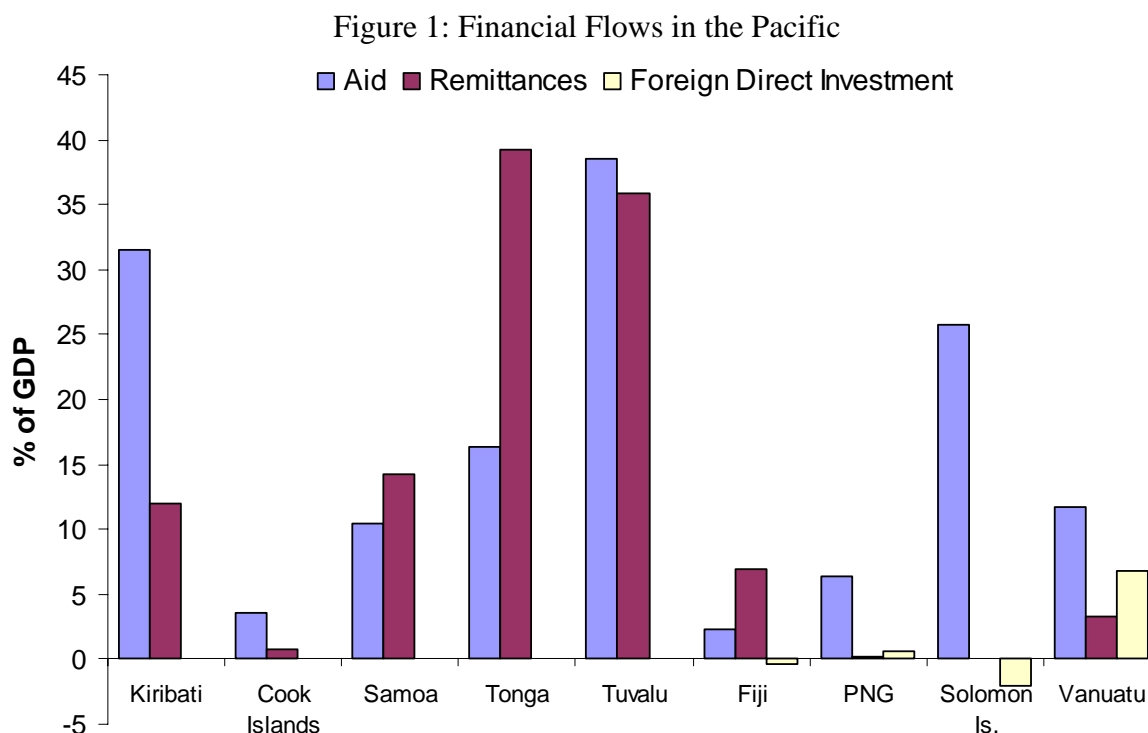
² See Addison, Mavrotas, and McGillivray (2005) for a discussion of the aid effectiveness literature.

higher real income of immigrants resulting from lower transactions costs is a gain to a group who themselves are of considerable policy interest (see du Raad and Walton, forthcoming).

The next section of this paper reports evidence on the growing importance of remittances in the Pacific. The data used to measure transactions costs and to examine hypotheses about the continued reliance on high cost methods for the New Zealand – Tonga remittance corridor are discussed in Section III. The transactions costs of remittances from New Zealand to Tonga are then described in Section IV. Several hypotheses about the continued reliance on high transactions costs methods are examined in Section V and the implications for public policy are discussed in Section VI.

II. Financial Flows in the Pacific

Figure 1 presents evidence on the importance of aid, foreign direct investment and remittances in the most recent year available for each of the Melanesian and Polynesian countries and for Kiribati. Data on remittances to the other Micronesian countries are less easily available from international sources. Even for the countries with reported data, it is likely that remittances are understated due to some transfers occurring through informal means such as travellers carrying cash back with them. Moreover, the data in Figure 1 only relate to monetary remittances rather than the provision of goods in-kind, for which there are no comparable cross-country data.³



Source: AusAID (2006), ADB (2006)

For the countries in Figure 1, aid is equivalent to 16.3 percent of GDP, on average. This is somewhat higher than remittances, which are 12.5 percent of GDP and much higher than

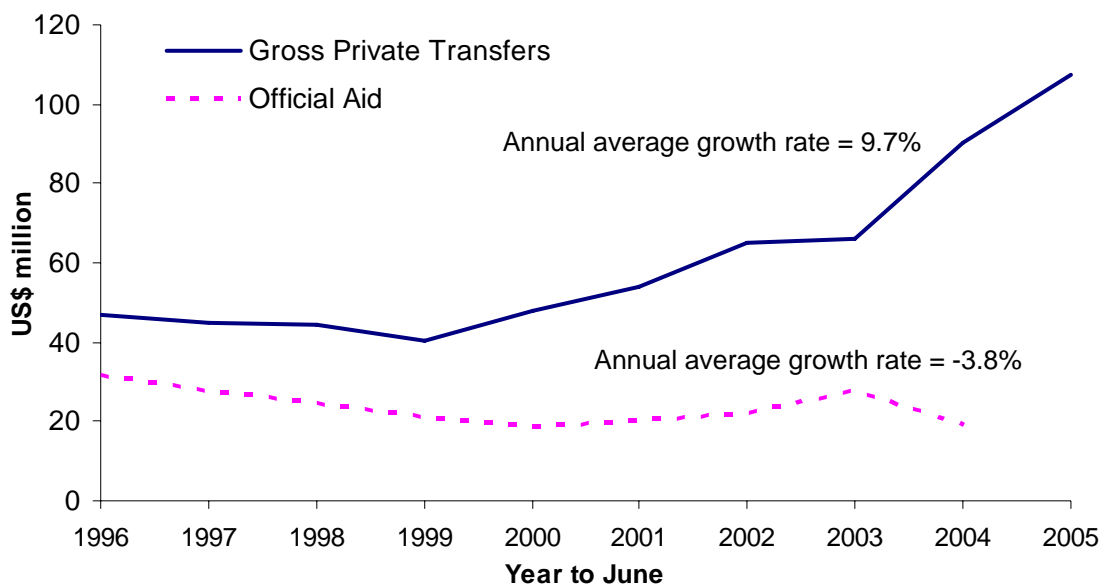
³ McKenzie (2006) reports survey evidence that cash remittances from New Zealand to Tonga were only 63 percent of the value of total *gross* remittances, with the remaining 37 percent in the form of goods. There are also substantial reverse flows of mainly goods, particularly in the form of items that have cultural or symbolic value (such as mats and tapa cloth). The issue of non-cash remittances, and their impact on the wedge between the value of gross and net receipts requires more detailed research.

foreign direct investment, which is only 0.6 percent of GDP. Total remittances to the nine countries in Figure 1 are ca. US\$350 million per year. Thus, across all Pacific Island economies (including those not in Figure 1) it is likely that total remittances are now in the order of NZ\$600 million per year.

There is considerable regional variation in the relative importance of aid and remittances, reflecting the much more limited options for labour mobility from Melanesia compared with Polynesia. Outside of Fiji, where remittances are growing rapidly due in part to the participation of soldiers in overseas military and peacekeeping operations, remittances in Melanesia average only 1.2 percent of GDP versus 14.6 percent for aid. However, across the Polynesian countries remittances average 22.5 percent of GDP versus 17.2 percent of GDP for aid receipts. Remittances are most important in Tonga, at 39 percent of GDP, and for that reason the rest of the discussion and analysis in this paper is based on the Tongan experience.

The trend for remittances to increase much faster than aid receipts is illustrated in Figure 2 for the case of Tonga. While aid receipts declined from US\$32 million in 1996 to less than US\$20 million in 2004, remittances grew substantially from \$47 million to \$90 million over the same time period. In terms of growth rates, remittances are increasing at almost 10 percent per year versus a 3.8 percent per year decline in aid receipts.

Figure 2: Financial Flows to Tonga, 1996-2005



Source: Remittance data from Connell and Brown (2005), National Reserve Bank of Tonga Quarterly Bulletin and aid data from World Development Indicators.

The trend in Figure 2 emphasises the importance of reducing the transactions costs of remittances for countries like Tonga. While aid efficiency is undoubtedly important, it relates to a declining source of external finance whereas the much less studied issue of remittance transactions costs relates to a rapidly increasing source of external finance for development in Tonga, and more broadly the Pacific.

III. Data

Three types of data are used to measure transactions costs in the New Zealand – Tonga remittance corridor and to examine hypotheses about why high cost methods continue to be relied upon. The first is information gathered from banks and money transfer operators to

measure both the fixed charges they impose on senders and recipients and the effective exchange rate commissions implied by the rate of exchange they offer. Detailed notes on these data are reported in Gibson, McKenzie and Rohorua (2006).

The second type of data comes from a sample of 101 recent Tongan immigrants to New Zealand, surveyed as part of the Pacific Island New Zealand Migration Survey (PINZMS). The PINZMS is a comprehensive survey designed to measure multiple aspects of the migration process. It has a detailed module on remittances, recording remittances sent and received in the form of money and goods, and the channels used to send remittances. In addition to questions about knowledge and use of various methods of sending money back to Tonga, the later part of the sample ($n=36$) were also asked questions about the factors such as accessibility and security that affected their choice of remittance method.

The third type of data is geographic data on population distribution, the road network and the location of all ATMs and Western Union outlets in the main island of Tongatapu in Tonga. This island contains two-thirds of the population and has most of the financial infrastructure, so it is a good location for considering the role that service accessibility for remittance recipients plays in determining the choice of remittance method. Specifically, the eight ATMs and five Western Union outlets on Tongatapu were geocoded and placed onto a digitised version of the road network, to simulate the travel distance that the population would face in reaching their nearest ATM or Western Union outlet.

IV. The Transactions Costs of Remittances

There are two types of transactions costs associated with remittances. The first one is fixed charges, such as the \$25 that banks charge senders of a telegraphic (wire) transfer, the \$5-\$8 that they charge for ATM withdrawals in another country (using a card linked to the remitters account in New Zealand) or the \$20 that Western Union charge for a money transfer.⁴ There may also be fees imposed on the recipient for receiving wire transfers or depositing bank drafts, in addition to costs for the remitter and recipient to communicate with each other (e.g. mailing a bank draft or telephoning to provide the code number for uplifting a Western Union transfer).

The second type of transactions cost is the effective exchange rate commission:

$$\frac{100 * (\text{Interbank Rate} - \text{Offered Rate})}{\text{Interbank Rate}}$$

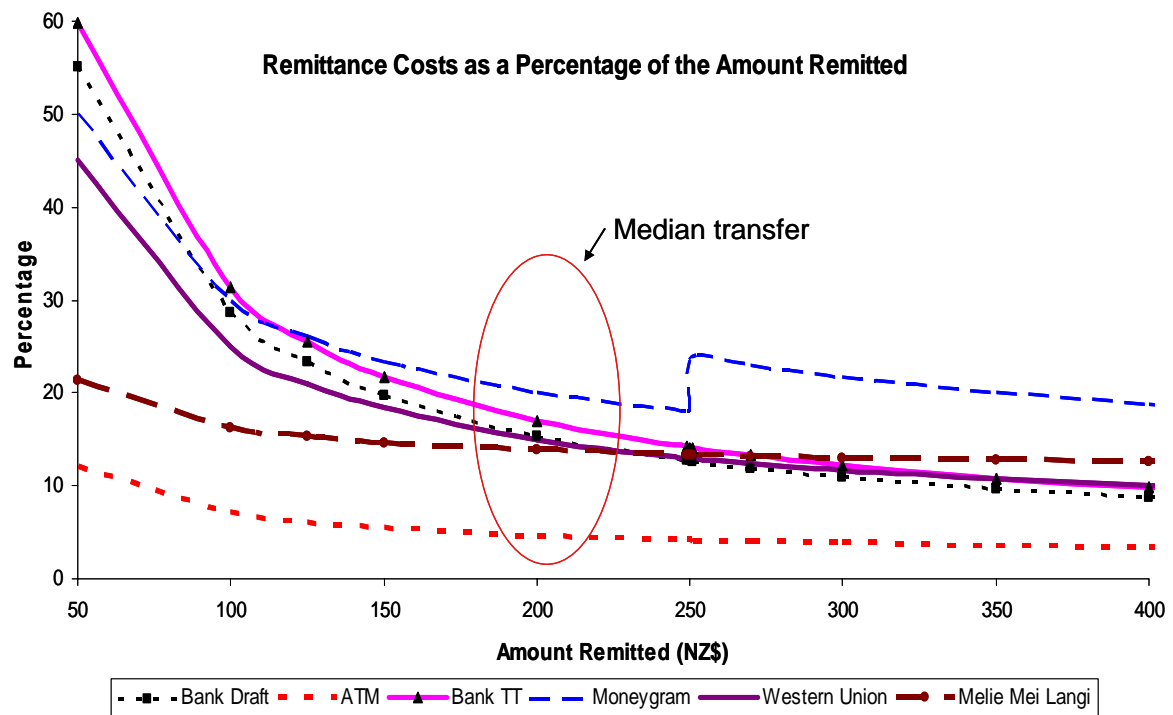
which depends on the gap between the offered exchange rate and the interbank rate. The exchange rate commission varies from 2-4 percent for the various New Zealand banks that offer money transfers in Tongan Pa'anga. However, for both the international money transfer operators (Western Union and Moneygram) and for a local Tongan operator (*Melie mei Langi*) the effective exchange rate commission averages almost 10 percent.

Figure 3 plots the effective transaction cost of remitting (taking both fixed charges and the effective exchange rate commission into account) as a percentage of the amount remitted for a selection of the methods available in the New Zealand to Tonga remittance corridor. The presence of fixed fees causes the percentage cost to fall with the amount remitted, with this

⁴ The other major money transfer operator, Moneygram/Travelex uses an escalating fee structure, charging \$20 for amounts under \$250, \$35 for amounts between \$251 and \$500, and \$50 for \$501-750. All of these costs were collected in early 2005.

effect largest for amounts under NZ\$200. The exception is Moneygram, where the step function in the fees causes the percentage cost to jump upwards between \$250 and \$251. It is notable that the survey of Tongan remitters indicated that the median transfer in any given transaction was NZ\$200 and this small amount makes the overall cost of remitting especially susceptible to the burden of fixed costs.⁵

Figure 3: Transactions Costs (as Percentage of Amount Remitted) for the New Zealand to Tonga Remittance Corridor



Source: Gibson, McKenzie and Rohorua (2006)

According to Figure 3, it costs between 19-31 percent to send \$100 by any method except the ATM card. For sending \$200 the costs are between 15-20 percent, and for \$300 between 11-22 percent (excluding the ATM card). An ATM card is always the cheapest method. Melie mei Langi and Western Union are the next cheapest for amounts under the median transfer of \$200, after which point the bank draft becomes cheaper. Bank drafts and telegraphic transfers are the cheapest apart from ATMs for larger amounts.

It is notable that for smaller transfers, the indigenous Tongan company, *Melie mei Langi* is more competitive than either the international money transfer operators or the banks (except for using an ATM card). *Melie mei Langi*, is run by the Tokaikolo Fellowship church but can be used by people of any denomination. It charges a fixed fee of NZ\$5 for amounts under \$1000 and \$10 for other amounts, and these fees are doubled for transfers to the outer islands on Tonga. Money is transferred in under one hour, and can be received at two branches in Tongatapu and at branches in Vava’u, Ha’apai and ‘Eua, while there is one branch in Auckland. The fact that a new entrant without the reputational and financial infrastructure advantages of incumbent banks and money transfer operators can provide a competitive

⁵ The annual amount remitted is much higher, because it is typically made up of ten or more small transactions per year.

service is suggestive of the presence of rents in the New Zealand – Tonga remittance corridor.⁶ Such rents might be competed away, to the benefit of remittance recipients and/or remitters, if additional competitive pressure could be introduced.

Table 1 compares the costs of sending money from New Zealand to Tonga with data from an international comparison of remittance costs undertaken by Orozco (2002). Note that these data are from four years ago, so competition and technological improvements might be expected to have lowered costs further. Despite this caveat, the costs of sending money from New Zealand to Tonga are higher than for all of the country pairs listed, for both banks and money transfer operators. Orozco reports an average cost of five percent for bank to bank transfers, and 12 percent for transfers by money transfer operators, which is almost half the cost of a bank transfer and two-thirds the cost of a money transfer operator for the same amount from New Zealand to Tonga.

TABLE 1: PERCENTAGE COST OF SENDING US\$200 BY COUNTRY

	Banks	Money Transfer Operators
Pakistan (from Saudi Arabia, U.S., U.K.)	0.4%	13.0%
Mozambique (from South Africa, U.S.)	1.0%	n.a.
Turkey (from Germany, U.S.)	3.1%	9.5%
Portugal (from France, U.S.)	3.4%	12.3%
India (from Saudi Arabia, U.S., U.K.)	6.0%	13.8%
Greece (from Germany, U.S.)	6.8%	9.5%
Philippines (from U.S.)	8.0%	10.3%
Mexico (from U.S.)	8.6%	10.6%
El Salvador (from U.S.)	n.a.	7.2%
Dominican Republic (from U.S.)	n.a.	8.5%
Tonga (from New Zealand)	12-13%	15-23%

Source:

Orozco (2002, Tables 7 and 14) and Gibson, McKenzie and Rohorua (2006)

One objection to comparisons such as those in Table 1 might be that the volume of remittances being sent to Tonga is lower than is sent to many of these comparison countries, and therefore differences in scale might explain the higher fees in Tonga. However, two good comparators to Tonga in this respect are Ghana and Mozambique since all three countries received between US\$65-70 million in remittances in 2003.⁷ The cost of sending 100 British pounds (approximately US\$176) to Ghana is under 5 percent for 7 money operators in the U.K. while the cost of a bank transfer from South Africa to Mozambique is only 1 percent.⁸ Based on these comparisons, it appears that money transfer from New Zealand to Tonga is approximately twice as expensive on average as bank transfers to a wide variety of countries from the U.S. and U.K, including countries with similar volumes of remittances as Tonga.

⁶ Note that the effective exchange rate commission for *Melie mei Langi* is slightly higher than for Western Union, so the competitiveness is for smaller transfers.

⁷ The source of this comparison is the World Development Indicators. It is clear from Figure 2 that remittance receipts for Tonga increased sharply since 2003, which would make any scale effect even less likely to account for the higher cost of remitting to Tonga, unless there was a similarly rapid increase in remittances for Ghana and Mozambique.

⁸ These transactions costs are obtained from www.sendmoneyhome.org.

V. The Reliance on Costly Methods of Remitting From New Zealand to Tonga

The evidence in Section IV suggests that transactions costs are high in the New Zealand – Tonga remittance corridor. However, there is at least one lower cost alternative, which is for the remittance recipient to have an ATM card linked to a New Zealand bank account set up by the sender. This is a fast and cheap way to send money, with withdrawal fees in the range of \$5 to \$8 and effective exchange rate commissions that are much lower than those charged by money transfer operators.

Money transfers using ATM cards are also reported by Isern, Deshpande and van Doorn (2005) to be the least expensive of any remittance method in the Latin American market. Moreover, even cheaper methods based on cell phones are becoming available in some remittance markets such as the Philippines.⁹ However such methods are quite technologically sophisticated compared with the simplicity of setting up a bank account for an immigrant that provides an ATM card for their own use and one for their recipient to use overseas. Hence the lower transactions cost of cell phone based methods may not be a good benchmark because such methods may also entail additional investment (in both hardware and cultural/technical acceptance) that is not feasible in the Pacific. In contrast, remittances based on ATMs are already known to be feasible in the Pacific so their transactions costs provide a feasible benchmark against which the other existing methods can be compared.

Despite their lower cost, ATM cards are an infrequently used method in the New Zealand – Tonga remittance corridor. Instead, a (slight) majority of the Tongan immigrants in the PINZMS sample who had remitted appear to be using Western Union, which has a transactions cost of 15 percent for the median transfer of NZ\$200 (Table 2). The other popular choice is *Melie mei Langi* which has a similar transactions cost for a transfer of \$200, but is cheaper for small transfers and more costly for larger transfers. But even for *Melie mei Langi*, whose transactions costs range from 12-16 percent for transfers in the range of \$100-\$500, the question is why this channel is preferred over much cheaper ATM cards.

TABLE 2: MOST FREQUENTLY USED REMITTANCE METHOD

	Frequency
Giving money to someone to take back when travelling	6.9%
Bank Transfer through Westpac	5.6%
Bank Transfer through Other Bank	1.4%
Western Union/NZ Post Office	51.4%
Travelex	4.2%
Melie mei Langi	29.2%
ATM card or credit card given to relative	1.4%

Source: Author's calculation from PINZMS data (for n=72 remitters).

While many factors are likely to affect remitter's choice of method, three are discussed here: *knowledge*, *access*, and *trust*. These headings provide a way of examining hypotheses about the continued reliance on high transactions costs methods in the New Zealand – Tonga remittance corridor.

⁹ See Box 6.6 of World Bank (2006) which describes how Filipino immigrants can use a cell phone to deposit money into an "electronic wallet" that can be used by the recipient in the Philippines to either make a withdrawal from an ATM or to pay for a variety of purchases. The transactions cost of this method are about one percent.

V.1 Lack of Knowledge

In addition to questions about the most frequently used method of remitting, the sample of Tongan immigrants were also asked about methods they had *ever* used, and methods they *knew* about but had not used. Although a total of 17 methods were covered by the questionnaire, remitters in the PINZMS sample only knew about 2.7 other methods on average (three other methods for both the median and mode) besides their most commonly used method. Significantly, only 5.5 percent of the sample of remitters knew that it was possible to use an ATM card linked to a New Zealand bank account to send remittances to Tonga.

The most widely known method was Western Union, which 97 percent of the remitters were familiar with. The next most widely known methods were *Melie mei Langi* (known about by 63 percent) and bank draft or wired transfers through either ANZ or Westpac (known about by 62 percent). In general, there appears to be limited knowledge of the alternatives to the channels used by the respondent. This lack of knowledge of other remittance methods could account for the continued reliance on high cost methods, especially given the successful advertising that Western Union undertakes in both Tonga and New Zealand.

V.2 Lack of Access

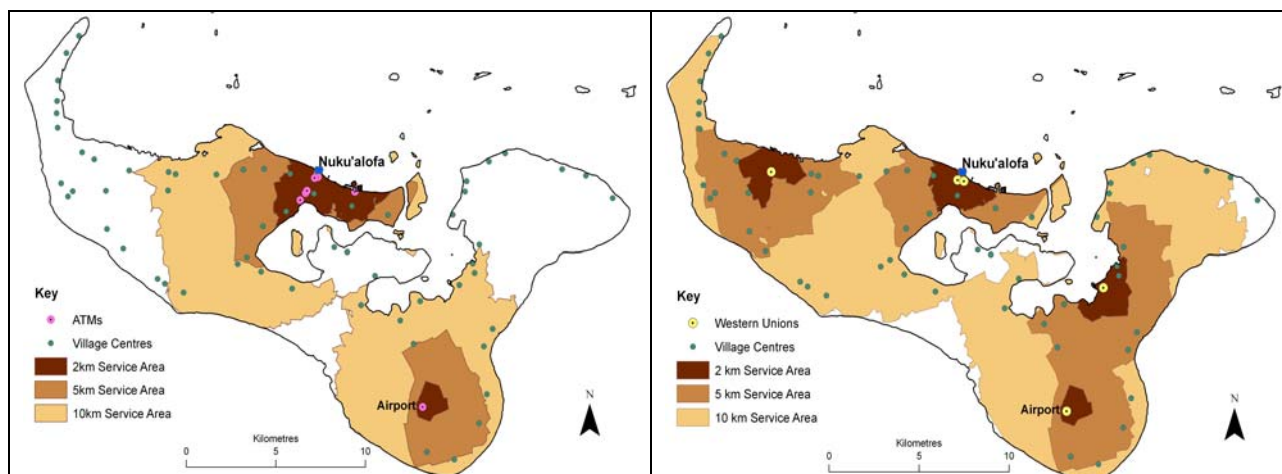
Alternative methods of remitting that have lower transactions costs may not be used if either senders or recipients cannot access them. Lack of access is most likely to be binding on recipients rather than senders due to the much denser financial infrastructure in New Zealand than in Tonga. In terms of physical access, there are more than 500 New Zealand Post shops in New Zealand where Western Union services can be accessed, a similar number of bank branches and even more ATMs. Moreover, all of remitters from the sample of Tongan immigrants had bank accounts and 98 percent of them had ATM cards, so technical access to ATM-based remittance methods is almost universal on the sender side.

However, access for remittance recipients may be more limited and this may be a determining factor over which remittance methods are chosen. Indeed, Maclellan and Mares (2006) note that an attraction of sending money through Western Union is the ease of access in rural areas and outer islands in the Pacific. A proper understanding of access cannot be obtained without studying the spatial distribution of facilities. Otherwise a service with many outlets clustered in one location may wrongly seem to be more accessible than one with fewer outlets, but distributed closer to the population. It is also important to model spatial access using the travel methods that the population rely on rather than assumed methods (such as crow-fly straight line distances).

In light of the above points, the access to ATMs and Western Union outlets was considered for the population on the main island of Tongatapu. The location of each of the eight ATMs (seven of which are located in Nuku'alofa) and the five Western Union outlets were geocoded and placed onto a digitised version of the road network, to simulate the travel distance that the population would face in reaching their nearest remittance receiving facility. The spatial distribution of the population is based on the village-level counts from the Tongan Census, which should be an adequate proxy for the distribution of remittance recipients since 78 percent of households in Tongatapu received remittances in the most recent survey,¹⁰ and the PINZMS data reveal no spatial patterns in remittance receipts. The resulting service areas for road travel to the nearest remittance receiving facility are shown in Figure 4.

¹⁰ The 2000/01 Household Income and Expenditure Survey, conducted by the Tonga Statistics Department.

Figure 4: Service Areas for ATMs and Western Union Outlets on Tongatapu, Tonga



Source: Boe-Gibson (2006)

It is apparent from Figure 4, and Table 3 which gives statistics derived from the maps, that even though there are only five Western Union outlets, their combined service areas for the longest specified travel distance of 10 kilometres covered 97 percent of the population. In contrast, the corresponding coverage for the eight ATMs is only 77 percent due to their clustering in Nuku'alofa. The greater population coverage for Western Unions is also apparent within a five kilometre service area, where they cover 68 percent of the population versus 53 percent for ATMs.

In terms of average travel distance rather than population covered in service areas, the population-weighted mean distance by road from village centres to the closest ATM on Tongatapu is 5.91 kilometres, while the mean distance to the nearest Western Union outlet is 3.97 kilometres (Table 3). The median distance (where half of the population face shorter journeys and half longer) is 4.34 kilometres for ATMs and 2.74 kilometres for Western Union outlets. These results suggest that ATMs are about 50 percent further away than are Western Union outlets for the average person on Tongatapu.

Table 3. Distance to Nearest Remittance Receiving Facility, Tongatapu

	ATM	Western Union
Mean distance for road travel	5.91 km	3.97 km
Median distance for road travel	4.34 km	2.74 km
% of population outside 2 km service area	61%	68%
% of population outside 5 km service area	47%	32%
% of population outside 10 km service area	23%	3%

The lack of ATMs outside of Nuku'alofa (and the airport) is not due to any lack of potential sites. There are branches of the Tonga Development Bank and private sector commercial facilities, such as service stations, that have the required cash, electricity, security and telecommunications. Indeed, when the data in Figure 4 are used in a simulation analysis to locate two additional ATMs so that they best service the population, while minimising travel times, the same locations are chosen as those where Western Union have located their outlets outside of Nuku'alofa and the airport. In other words, the Western Union outlets appear to be situated in the optimal locations if the aim was to cover the greatest amount of the population

with a given number of outlets. Thus, one reason for the continued reliance on costly methods of sending money from New Zealand to Tonga may be that ATMs in Tonga are geographically less accessible than Western Union outlets for the recipients.

V.3 Lack of Trust

An even more important reason why high cost remittance channels like Western Union may be the most popular with remitters is security concerns. Transfers made with Western Union require the remitter to contact the recipient and give them a unique, transaction-specific code in order to obtain the funds from the Western Union outlet. In contrast, the automation provided by ATMs, which gives them a transaction cost advantage, also may cause the remitter to believe that they do not have full control of the transactions.

Evidence for these security concerns comes from the responses to questions about the reasons for the choice of remittance method that were asked of a sub-sample of the Tongan immigrants in New Zealand.¹¹ Three-quarters of these respondents indicated that they would not use ATM's as a method of remitting because they either did not trust the ATM machines in Tonga¹² or they did not trust their relatives to only withdraw the required amount. This second problem could be easily addressed by having an account dedicated for making transfers, which held a minimum balance and had no way of accessing the other funds of the account-holder in New Zealand. The use of similar accounts in other countries is described by Isern, Deshpande and van Doorn (2005). The security changes made by the New Zealand banks after the thefts of ATM details by "skimming" gangs in early 2006 could also help address the first security concern. However, until the remitting community are aware of these ways of guarding the security of their funds, they may be likely to continue using more costly methods of sending money that given them the desired degree of control over the transaction.

VI. Discussion and Conclusions

The results reported here suggest that the average cost of sending money from New Zealand to Tonga is high by international standards, comprising 15 to 20 percent of the amount sent for the median remittance transaction of NZ\$200. Lower transactions costs (less than five percent) are available if remittances are made using ATM cards but this method is very rarely used. Instead, a (slight) majority of remitters use Western Union most frequently, and then *Melie mei Langi* which is a local church-run Tongan company. This ten percentage point spread between the most popular and the cheapest remittance methods means a potential loss for Tonga equivalent to four percent of GDP.

Three possible reasons for the continued reliance on high transactions costs methods are discussed: *knowledge*, *access*, and *trust*. In terms of *knowledge*, Tongan immigrants in the PINZMS sample do not appear to be aware of many of the alternatives to their own most frequently used method of sending remittances. In terms of *access*, ATM machines in Tongatapu are shown to be less geographically accessible than Western Union outlets – indeed, the Western Union outlets appear to be situated in the optimal locations if the aim was to cover the greatest amount of the population with a given number of outlets. In terms of *trust*, remitters appear to have concerns about the security of the ATMs in Tonga and about

¹¹ Specifically, those interviewed after February 2006 ($n=36$). These were recent immigrants, mostly arriving in late 2005, and even within their first few months of residence in New Zealand 24 had already sent remittances back to Tonga and it is this group of 24 whose responses are reported here.

¹² The survey was done at the same time as the "skimming" outbreak where ATM card details were stolen in Auckland and used to make unauthorised withdrawals.

the security of their money in New Zealand if they provide unrestricted access to their bank account by providing an ATM card to whomever it is that they send remittances to in Tonga.

Whether these concerns about loss of control over the amount remitted, the security and accessibility of the remittance method, and remitters knowledge of the alternatives can be overcome is a subject for separate research. However there should be substantial incentive for innovations along these lines given the very large and potentially avoidable transactions costs that are currently being borne in the New Zealand – Tonga remittance corridor. It should take rather less than four percent of Tongan GDP to inform remitters about alternative methods, to provide additional ATMs and to solve the issues of security and loss of control that will still act as a constraint even if knowledge and access are improved.

Although the results in this paper relate only to the New Zealand – Tonga remittance corridor, estimates reported by McKenzie (2006) suggest that transactions costs for remittances from Australia to Fiji, Samoa, Tonga and Vanuatu are at least as high as for those from New Zealand to Tonga. Moreover, transactions costs for sending money from the U.S. to Tonga are higher than for sending it from New Zealand.¹³ Thus it is likely that the ten percentage point spread between cheapest and most widely used remittance methods in the New Zealand – Tonga remittance corridor is similar for other remittance corridors into the Pacific. Consequently, the region as a whole (including the immigrant populations in Australia, New Zealand and the U.S.) may be losing up to NZ\$60 million per year from having remittances (from all sources) sent through costly rather than cheap channels. This amount might be justified as the price of services such as accessibility, familiarity and security that are provided by the incumbent banks and money transfer operators. However it can also be viewed as a rent available to be competed away by lower cost operators who introduce more technologically advanced methods into these remittance corridors while still providing sufficient accessibility and security. Finding ways to achieve these more efficient financial services would be a useful activity for the developed countries in the region who already control many of the banking services and who have all undertaken considerable financial deregulation and sector rationalisation in recent years.

A simple but highly effective starting point, with benefits for both Pacific Islanders in New Zealand and for Pacific Island economies, would be for either an NGO or government agency to create a local version of the www.sendmoneyhome.org website. This website is hosted in the United Kingdom and has a searchable database that enables would-be remitters to easily compare the services provided by various money transfer operators and banks for transfers from each of seven immigrant host countries to each of 32 emigrant-source countries. The fees for both small (£100) and large (£100) transfers are reported along with the net amount that should be received by the recipient and the speed of the transfer. This website is the outcome of a project by the Department for International Development (DFID) which aims to improve access, transparency and choice for remittance senders and recipients. The ultimate result of this greater information availability should be lower transactions costs and greater security of transfers, which should help to improve the development impact of remittances.

¹³ An exception is an internet-based money transfer product, Ikobo.com whose transaction costs are lower even than for most methods of sending money from New Zealand but no members of the PINZMS samples in either New Zealand or Tonga had any knowledge of this method.

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