

# Remittances in the Pacific<sup>1</sup>

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## 1. Introduction

Small island states have among the highest rates of migration in the world (Table 1).<sup>2</sup> The average island country with a population under 1.5 million has 17 percent of all citizens overseas, and several have more than 30 percent abroad. Many of the Pacific Islands follow this pattern, with approximately one-third of Samoa and Tonga’s populations living in another country. Some of the smallest islands in the Pacific have even more dramatic migration rates. More individuals born in Niue and Tokelau now live in New Zealand than on either of these two islands.<sup>3</sup> Together with high migration rates one finds heavy dependence on remittances in many of these countries.<sup>4</sup> Tonga, the main subject of this lecture, has remittances equal to 39 percent of GDP, the highest measured rate in the world.

The growing size of remittances around the world has led to renewed research attention to their importance for development and discussion of policies designed to increase the benefits of migration (e.g. World Bank 2005, GCIM 2005). One question which can arise

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<sup>1</sup> This lecture builds on surveys and joint work conducted with John Gibson and Halahingano Rohorua. Thanks to John Gibson for useful comments.

<sup>2</sup> Measurement of migration stocks and remittances received is poor in a number of countries, so the numbers in Table 1 should be treated with caution.

<sup>3</sup> The population of Niue is 1,761, with 5,328 Niue-born in New Zealand; Tokelau’s population is 1,513 with 1,662 Tokelau-born living in New Zealand. Sources: Government of Niue (2004), Statistics New Zealand (undated a, undated b).

<sup>4</sup> Connell and Brown (2005) provide a recent overview of remittances in Pacific Island countries, and discuss reasons why some of the relatively high migration islands receive little remittances.

in these discussions is whether there is scope for countries such as Tonga, which already receive large remittance flows, to further increase the benefits from remittances. This lecture will use a recently conducted survey of Tongan migrants in New Zealand, and Tongans in Tonga to argue that there is still sizeable scope for policies designed to lower the costs of sending money and improve the knowledge of migrants and their families about remittance products.

**Table 1: Small Islands, Large Migrations**

	Population (‘000s)	% Migrants	Remittances (% GDP)	Main Destination
<i>Africa</i>				
Cape Verde	470	18.7	11.5	Portugal
Comoros	600	3.2	3.8	France
Mauritius	1222	6.9	4.0	France
Sao Tome & Principe	157	8.5	1.7	Portugal
Seychelles	84	8.7	0.3	U.K.
<i>Caribbean</i>				
Antigua & Barbuda	79	28.9	1.5	U.S.
Dominica	71	32.0	1.6	U.S.
Grenada	195	23.8	5.3	U.S.
St. Kitts & Nevis	47	38.5	1.1	U.S.
St Lucia	161	17.5	0.6	U.S.
St Vincent & Grenadines	109	31.1	0.8	U.S.
Trinidad and Tobago	1313	18.8	0.8	U.S.
<b><i>Pacific Islands</i></b>				
<b>Fiji</b>	835	13.5	1.1	Australia
<b>Kiribati</b>	96	2.4	12.0	U.S.
<b>Marshall Islands</b>	53	13.0	n.a.	U.S.
<b>Micronesia, F.S.</b>	125	12.2	n.a.	U.S.
<b>Palau</b>	20	20.2	n.a.	U.S.
<b>Samoa</b>	178	35.1	14.2	New Zealand
<b>Solomon Islands</b>	457	0.5	0.9	Australia
<b>Tonga</b>	102	31.1	39.2	New Zealand
<b>Vanuatu</b>	210	1.0	3.3	Australia
<i>South Asia</i>				
Maldives	293	0.8	0.4	India

sources: Remittances and Population from World Development Indicators

Central Database (August 2005 update)

Migration stocks and destinations from foreign born version 4 of

GTAP database of Parsons et al (2005)

n.a. denotes not available

Secondly, the survey I use here collects much more detailed information on remittance transactions than is commonly the case. I use this information to provide a description of

some aspects of remittances which are typically missed in standard surveys, with implications for the measurement of remittances. The survey also matches a small sample of migrants in New Zealand to their remaining family members in Tonga, interviewing both groups. I will conclude by using this matched sample to look at how expectations for the continuation of remittances differ between migrants and their families.

## **2. A Brief History of Tongan Migration to New Zealand**

The Kingdom of Tonga is an archipelago of islands in the South Pacific, about two-thirds of the way from Hawaii to New Zealand.<sup>5</sup> The population is just over 100,000, with more than 30,000 additional Tongans abroad (Table 1). Tongan migration to New Zealand really began in the 1960s and 1970s, with Tongans arriving on temporary permits to take up work opportunities. After their permits expired, some returned to New Zealand and others stayed on in New Zealand illegally. An amnesty in 1976 granted many of these permanent residence.

Migration for work continued in the late 1970s and 1980s, and by 1986 the Tongan population in New Zealand had reached 13,600. In 1991 New Zealand introduced a points-based selection system for immigration, in which potential migrants are awarded points for education, skills, and business capital. Few Tongans qualified to migrate under this points system, and so most Tongan migration during the 1990s was under family-sponsored categories – as the spouse, parent, or child of an existing migrant. For example, in 1997/98 only 29 Tongans were admitted as principal applicants under the

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<sup>5</sup> This section is based on information from the CIA World Factbook (<http://www.cia.gov/cia/publications/factbook/geos/tn.html>) and from the Te Ara Encyclopedia of New Zealand ([www.teara.govt.nz/NewZealanders/NewZealandPeoples/Tongans/1/en](http://www.teara.govt.nz/NewZealanders/NewZealandPeoples/Tongans/1/en)).

points system, compared to 436 under family categories. With family migration, the Tongan-born population in New Zealand had grown to 19,000 by the 2001 Census.

In early 2002 another channel was opened up for immigration to New Zealand, through the creation of the Pacific Access Category (PAC), which allows for a quota of 250 Tongans to emigrate to New Zealand each year. Applicants to this category must be aged 18 to 45, meet a minimum level of English ability requirement, meet health and character requirements, and have an offer of employment in New Zealand. It is this group of new migrants through this category that I shall discuss.

### **3. Data**

The main source of data I use is the Tongan component of the Pacific Island-New Zealand Migration Survey (PINZMS) conducted in the first half of 2005. The PINZMS uses a sample frame of applicants for the Pacific Access Category. More individuals apply to migrate than the quota allows, and so a lottery is used to allocate visas amongst applicants. Comparison of winners and losers in this lottery is used in other work using this survey to estimate the causal effect of migration on a number of migration outcomes (McKenzie, Gibson and Stillman, 2006, Stillman, McKenzie and Gibson, 2006). In addition to sampling migrants in New Zealand who come through the PAC, the survey samples applicants for the quota who remain in Tonga, a sample of non-applicants who are in the same villages as the applicants, and a sample of remaining household members of the migrants in New Zealand. The first round provides a sample of 65 migrant households in New Zealand, and 230 households in Tonga. 45 out of the 65 migrants in

New Zealand left behind household members in Tonga, and we were able to survey 28 of these remaining households.

The PINZMS is a multi-topic detailed survey designed to look at many aspects of the migration process. Detailed modules on remittances are given to migrant households in New Zealand and to all households in Tonga. The surveys collect information on remittances sent and received by both groups, separates these into money and goods flows, collects information on the channels used to send remittances, and asks a number of questions about knowledge of remittance methods and expectations about future remittance patterns.

I supplement the PINZMS survey with information on the cost of sending remittances, gathered directly from remittance service providers. For this lecture I have additionally collected information on the costs of sending from Australia to several Pacific Island countries, and from the United States to a couple of small Caribbean countries for comparison purposes.<sup>6</sup>

#### **4. The high cost of remitting in the Pacific**

There are two main financial costs involved in sending money across borders.<sup>7</sup> The first is the fee charged by the remittance sending company, which is usually fixed or a step

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<sup>6</sup> Costs of sending from New Zealand to Tonga were collected in March 2005, at the time of the PINZMS survey (see Gibson, McKenzie and Rohorua 2006 for details). Costs of sending from Australia and the United States via Western Union and Moneygram were collected in January 2006.

<sup>7</sup> A third potential cost faced by the receiver is a charge for receiving remittances. For example, Westpac Bank in Tonga charges a fee to receive a telegraphic transfer or deposit a bank draft. Western Union typically does not charge the recipient, although there may be a fee to notify the recipient if they are in a distant area. A fourth cost that occurs in some areas of the world is the “float” or overnight interest collected by remittance companies (see World Bank 2005). This is not a major element in the Pacific.

function. For example, ANZ and Westpac banks in New Zealand charge a fixed fee of NZ\$25.00 to send a *telegraphic transfer* (wire transfer) from a bank account in New Zealand to a bank account in Tonga. Western Union charges a fixed fee of NZ\$20 in New Zealand to send to Tonga or Samoa, but charges a stepped fee in Australia: A\$15 for amounts of A\$75 or less, A\$20 for amounts of A\$76-300, and A\$25 for amounts of A\$301-999.

This component of the cost is most easily seen by consumers. However, the second component of costs is less transparent. In addition to the fixed fee, remittance sending companies typically make money by offering migrants a less advantageous exchange rate than the interbank rate. The exchange rate commission charged by the bank or remittance sending company can be calculated by:

$$R = \frac{100 * (\text{Interbank Rate} - \text{Offered Rate})}{\text{Interbank Rate}} \quad (1)$$

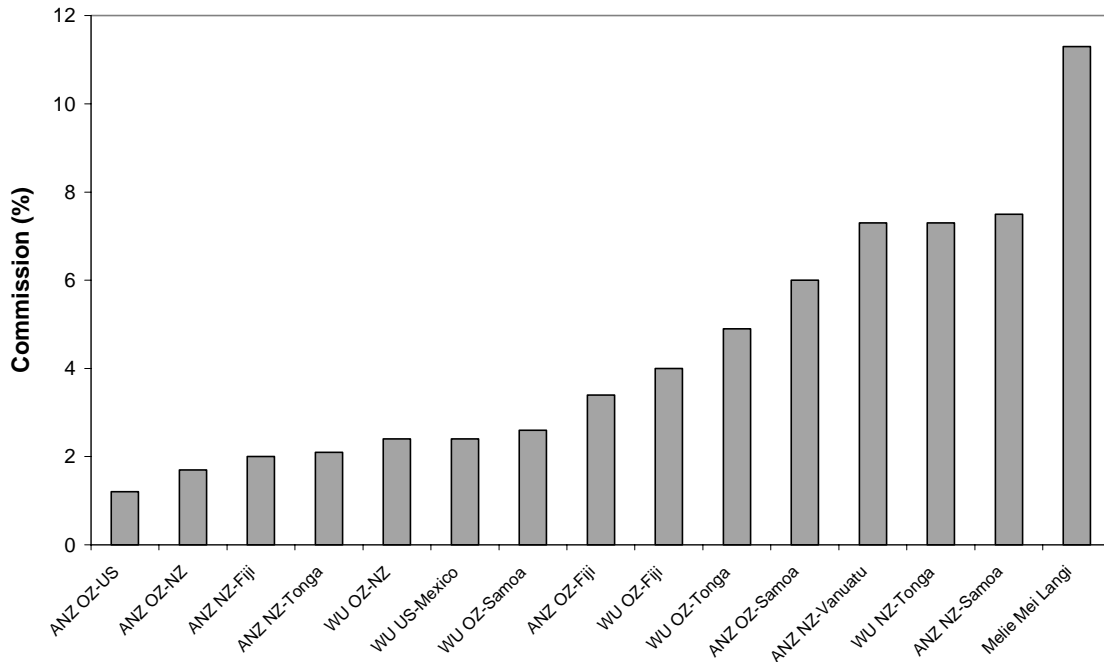
For example, at the interbank rate<sup>8</sup>, NZ\$100 would buy 138.71 Pa'anga. However, at the exchange rate offered by ANZ Bank, one would instead receive 135.79 Pa'anga (and also have to pay the fixed fee). The exchange rate commission of 2.1 percent therefore represents the loss of Pa'anga compared to what one would receive at the interbank rate. Figure 1 graphs the exchange rate commission from New Zealand and Australia to a number of different Pacific Island countries for ANZ Bank telegraphic transfers and Western Union transactions. For comparison purposes I also show rates from Australia to

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<sup>8</sup> Obtained from [www.oanda.com](http://www.oanda.com). The interbank rate is the market rate used between banks for transactions of US\$1 million or more. This is the "official rate" typically quoted in the media.

the United States and New Zealand, and the Western Union rate from the United States to Mexico, one of the world's most competitive markets.

**Figure 1: Exchange Rate Commission on Remittances**

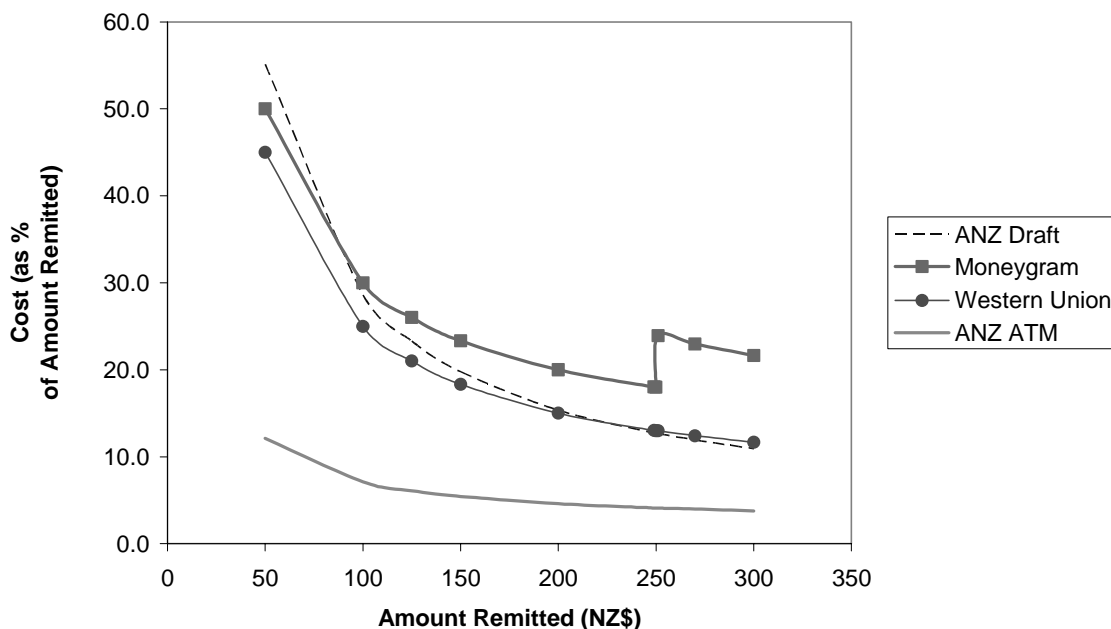


Note: ANZ = ANZ Bank Telegraphic Transfer rate, WU=Western Union rate, OZ=Australia, NZ=New Zealand, US=United States

Figure 1 shows a wide range of exchange rate commissions. The highest commission is charged by *Melie mei Langi*, a church-run remittance channel for sending money from New Zealand to Tonga. This channel charges an extremely low fixed fee (NZ \$5), which is attractive to those who send small amounts, even though a high exchange rate commission is being paid. Moreover, even between the ANZ bank and Western Union, it is not the case that one company always offers the better rate: Western Union has a lower rate to Samoa, but higher rates to Tonga for example.

Figure 2 plots the overall cost of remitting from New Zealand to Tonga by different channels, expressing the cost as a percentage of the amount remitted. The cheapest method by far is to use an ATM card: Migrants in New Zealand can give their relative a second card, which can then be used to withdraw from the ATM for a fee of NZ\$5-8 for most banks. The other methods all have much higher fixed fees, resulting in extremely high costs of remitting small amounts. For example, remitting NZ\$100 (US\$68) ends up costing 25-30% of the amount remitted.

**Figure 2: Remittance Costs from New Zealand to Tonga by Channel**



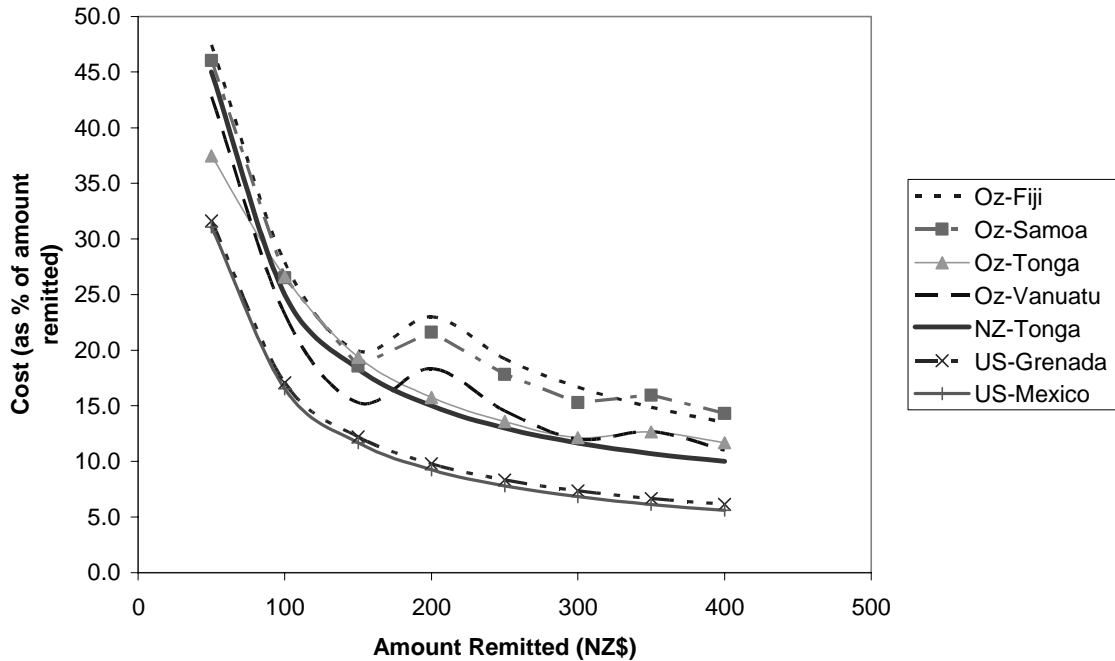
Source: adapted from Gibson, McKenzie and Rohorua (2006)

These high levels of costs are not atypical in the Pacific, and are higher than in many other regions of the world. Figure 3 shows the cost of sending from New Zealand to

Tonga is very similar to that of sending from Australia to other Pacific Island countries, and higher than from the United States to Mexico, and from the United States to Grenada, another small island country. In Gibson, McKenzie and Rohorua (2006) we compare the cost of sending US\$200 (NZ\$137) in different remittance channels around the world. The cost of 15-23 percent from New Zealand to Tonga is approximately twice the average cost of sending from France, Germany, the U.S. and U.K. to a wide variety of destinations including Pakistan, Mozambique, Portugal, Greece and the Philippines. This is not simply a result of small economies of scale in Tonga, since Ghana and Mozambique, which receive the same total volume of remittances as Tonga, have costs of 5 percent or less for sending this amount.

These high costs of sending money in the Pacific therefore suggest that there is room for policies aimed to lower these costs. The key question which then arises is how sensitive remittance senders are to the cost. We asked Tongan migrants in New Zealand how much they sent during their last remittance transaction, the cost of sending this, and how much they would have sent if fees had been only half as much. Based on these answers, Gibson, McKenzie and Rohorua (2006) estimate that the average cost-elasticity of remittances is -0.22, so that when costs fall, remitters will send more remittances. As an example, if the cost of sending from New Zealand to Tonga were to fall to levels just above those between the United States and Mexico, we calculate that instead of sending NZ\$200, remitters would send NZ\$228, and receiving households would experience a 27.5 percent increase in the amount of remittances received in local currency. Given the large share of remittances already in household incomes, this is a sizeable potential gain.

**Figure 3: Costs are high elsewhere in the Pacific too**



Notes: Amounts shown are based on Western Union rates from Australia, and Moneygram rates from the United States.

### **5. What can be done to reduce costs?**

These high costs therefore do suggest that there is scope for increasing remittances, even in a country like Tonga which already receives a large amount. What then can be done to reduce these costs? The World Bank (2005)'s recent *Global Economic Prospects* report on remittances emphasized three policies for lowering remittance transaction costs:

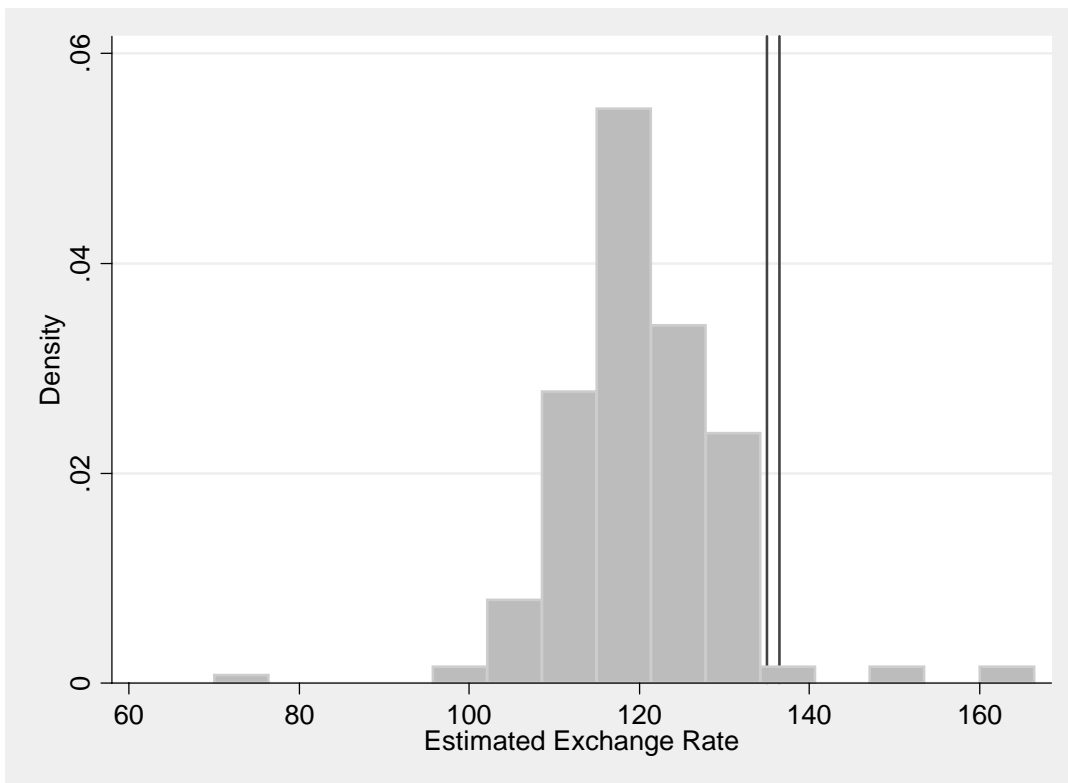
- 1) Promoting Competition
- 2) Improving Access of Migrants to the Financial System
- 3) Disseminating Information

In the Pacific case, migrants do have a range of options available for sending money. The small size of these economies suggests that there is likely to be a limit on the number of separate banks and money transfer operators who can offer services. I therefore do not believe there is that much scope for enhancing competition through further entry of new remittance providers. All of the Tongan migrants in New Zealand who send remittances have bank accounts, and 98 percent have ATM cards. Among the sample of households in Tonga, 79 percent have bank accounts and 54 percent have ATM cards. ANZ and Westpac Banks both have four ATM locations in Tonga, compared to Western Union's 18 locations. There is thus some scope for expansion of access to financial services *within Tonga*, making it easier for migrants' family members to receive remittances through direct bank transfers and ATMs. As we saw, the ATM card transaction had by far the lowest fee, so any expansion of this channel can potentially have a large effect on costs.

What about information dissemination? The pricing of remittance transactions is rather opaque, particularly with regard to the exchange rate component. Phone calls to several of the non-bank remittance sending companies were met with suspicion, and, in some cases, refusal to provide information on the exchange rate or cost of sending without visiting the office in person. Moreover, many migrants are not aware of the size of the commission being charged, or what the interbank exchange rate actually is. We asked migrants in New Zealand and remittance receivers in Tonga what the New Zealand/Tonga exchange rate was. Figure 4 shows a histogram of the answers in Tonga, with the dual vertical lines showing the Westpac/ANZ exchange rate (left line) and

Interbank exchange rate (right line). Although the exchange rate was very stable over the survey period, the mean and median exchange rate quoted by the Tongan remittance receivers are around 120 pa'anga/NZ\$100 which understates the true exchange rate by around 12 percent. Similarly among migrants sending remittances the mean reported exchange rate was 122 pa'anga/NZ\$100. Lack of knowledge about the exchange rate therefore provides a window in which remittance companies can extract high commissions.

**Figure 4: Tongans' reported exchange rate (Pa'anga per 100 NZ dollars)**



In addition to incomplete information about the exchange rate, many remittance senders and receivers have rather limited knowledge about the range of different remittance

sending methods that are available. The PINZMS survey asked senders and receivers whether they knew about particular methods, and whether they used them. Table 2 shows that almost all remitters and remitees know about Western Union, and most have used it. Only about half of the remitters in New Zealand know how to send bank transfers via various banks, with usage much lower. Melie mei langi is known and used by about half the migrants, but less known among the receivers, who know more about Moneygram.<sup>9</sup> Despite ATMs being the cheapest method, only 2 percent know about sending money this way. No one knew about iKobo.com, a low-cost internet-based method for sending money.

**Table 2: Knowledge and Use of Different Remittance Channels**

<i>Channel</i>	Remittance Senders in New Zealand		Remittance Receivers in Tonga	
	know	use	know	use
Friend or Relative paying for airfare		6.8		2.9
Friend or Relative bringing back money on visit		4.5		4.9
Sending/Receiving money through family/friends visiting overseas		13.6		4.4
Sending/Receiving money through another person		45.5		28.6
Sending/Receiving money through my church	9.1	2.3	1.5	0.5
Travelers Cheque	2.3	0.0	1.5	0.5
Bank Transfer through ANZ	47.7	0.0	13.1	5.3
Bank Transfer through Westpac	52.3	4.5	13.1	4.9
Bank Transfer through another bank	38.6	2.3	8.7	1.5
Western Union	95.5	77.3	92.2	90.3
Travelex	6.8	6.8	1.5	1.0
Moneygram	6.8	2.3	46.6	43.7
Melie Mei Langi	47.7	47.7	24.8	24.8
iKobo	0.0	0.0	0.0	0.0
ATM card or credit card from relative	2.3	2.3	2.4	1.0
Sample Size	49	49	206	206

Notes:

Knowledge of the first four categories was assumed

Thus while there is competition, and migrants and their families do generally have access to bank accounts, the ability of both of these factors to help lower remittance costs seems

<sup>9</sup> Note that the sample of receivers includes those receiving money from family members who have migrated to New Zealand, Australia and the United States through other methods than the Pacific Access Category that the sample of migrants come from.

to be hampered by a lack of information. There appears to be a role for information dissemination in increasing the benefits of competition, and allowing migrants to access lower costs. The relatively small size of migrant communities may act as a barrier to widespread advertising campaigns by money transfer companies, and the time involved in researching these options may make it hard for individual migrants to know whether or not they are getting a good deal. This then suggests a role for community organizations or migrant news organizations to better disseminate this information.<sup>10</sup> Weekly newspapers directed to the Fijian, Tongan, and Samoan communities in New Zealand could provide a list of the fixed cost, exchange rate premium, and amount received from sending \$NZ100 and \$NZ200 via different mechanisms.

## **6. What does a richer remittance survey tell us about remittances?**

The second theme I wish to discuss in this lecture involves dimensions of remittances that may not be well picked up in standard surveys and official statistics. Standard household income and expenditure surveys typically ask very little detailed information about remittances. For example, the ENIGH surveys in Mexico only report the value of remittances received by households. Even more specialized migration surveys such as the Mexican Migration Project (MMP) and Latin American Migration Project (LAMP) used by Catalina Amuedo-Dorantes in this lecture series only ask the average monthly remittances sent and the purpose of these remittances.<sup>11</sup> In contrast, the PINZMS has ten

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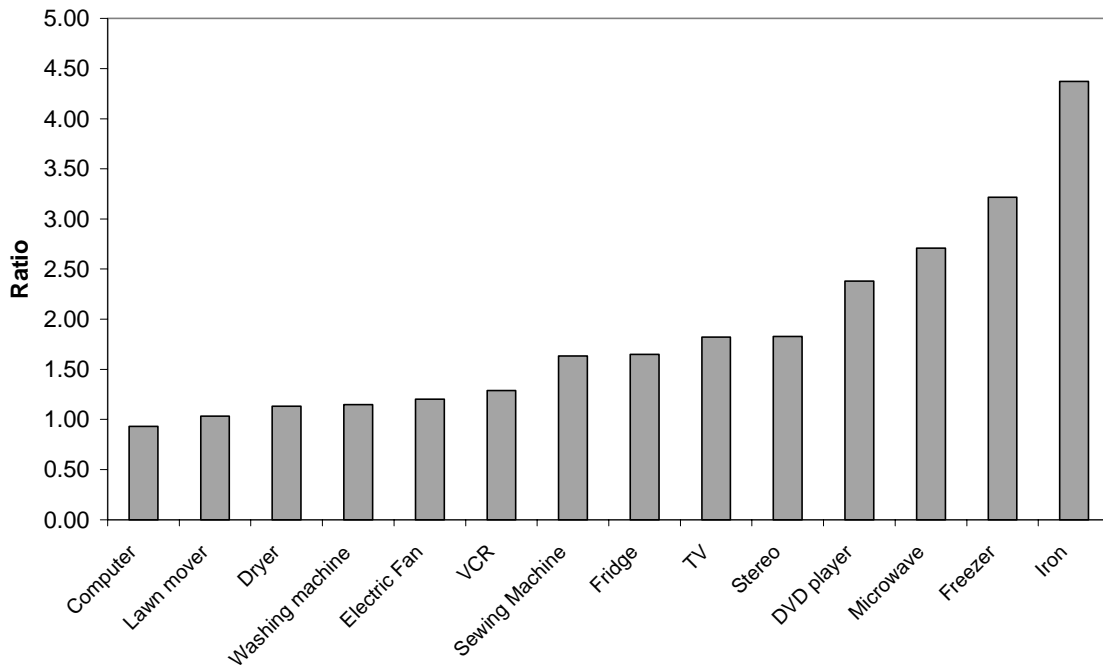
<sup>10</sup> An alternative would be for the Pacific Island consulates to provide this service for their migrants. Mexico's consulates in the United States collect weekly data on the costs of sending money from 9 cities in the United States and publish it on Mexico's consumer protection website [www.profeco.gob.mx](http://www.profeco.gob.mx).

<sup>11</sup> See Amuedo-Dorantes (2005) and documentation on MMP and LAMP webpages.

pages of questions on remittances, providing richer detail on some important aspects of remittance transactions.

The first aspect of this I consider is what is being measured by remittances. Officially recorded remittances are a large share of GDP in many Pacific countries, but do not capture all of the remittance action occurring. Firstly, as seen in Table 2, a number of remittance transactions occur through informal channels, such as sending money back with friends or family visiting from overseas. Secondly, in addition to cash, migrants also remit goods such as consumer durables. These can be particularly important in small island economies where the supply of durable goods is limited and prices are higher than in the migrant destinations. For the sample of 14 durable goods shown in Figure 5, the price in Tonga averages 1.7 times the price in New Zealand.

**Figure 5: Ratio of Price in Tonga to Price in New Zealand**



Source: Prices collected in New Zealand and Tonga in September 2005

The PINZMS asked migrants separately the remittances they had sent as monetary transfers, and remittances sent in the form of goods. On average cash remittances accounted for 75 percent of total remittances sent, and 63 percent of total remittances received by all remittance receivers in Tonga (not just those receiving from the New Zealand sample). Therefore surveys and official statistics which focus solely on monetary transfers in the Pacific Islands are likely to be missing 25 to 40 percent of remittance transactions. Goods remittances are also important in other areas of the world, although more work elsewhere is needed to generalize this result to obtain an estimate of the undercount of remittances at a world level.

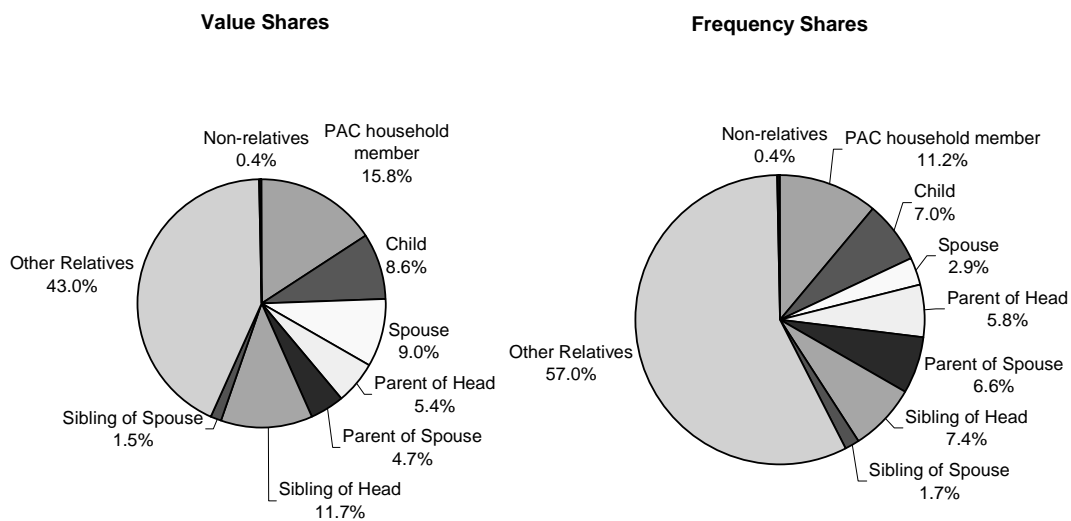
However, another understudied aspect of remittance transactions is reverse flows. Migrants not only send cash and goods to family members back home, but also receive them. 22 percent of the migrants who had sent remittances in New Zealand had also received remittances from Tonga. However, remittances received are mostly in the form of goods, rather than cash – on average cash received account for only 11 percent of total remittances received, with goods accounting for 89 percent. These goods often tend to be handicrafts, food, and other nostalgic goods. On average these goods equaled 43 percent of the value of remittances sent by the migrants in New Zealand, meaning that the net flow of remittances is substantially smaller than the gross flow.<sup>12</sup>

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<sup>12</sup> This pattern of bidirectional remittance flows with goods as well as cash corresponds with findings of other remittance studies in the Pacific. See Connell and Brown (2005) for a review.

The next aspect which a richer survey reveals is that many remittances do not come from former household members. Figure 6 uses the sample of remittance receivers in Tonga to plot the share of remittances received according to the sender's relationship to the household head. Both value shares and frequency shares are shown, in case one or two very rich relatives are driving all of the value share results. Remittances received by former household members who moved to New Zealand through the Pacific Access Category (PAC household members) are the only remittances which we know for sure came from a former household member. Spouses abroad are also almost certain to be former household members, while children would have been household members at some stage, but may have been living outside of the household prior to migration. These three groups however together account for only 34 percent of the value of remittances received, and 21 percent of the number of remittance transactions.

**Figure 6: From Whom do Tongans Receive Remittances?**



Parents of the head and spouse of the head may or may not have lived with the household prior to migration. Siblings of the household head are much more likely to send remittances than siblings of the spouse of the head. However, it is likely that many of these brothers and sisters of the head were not living in the household prior to migration. Moreover, the largest source of remittances is other relatives, such as cousins, uncles, aunts, grandparents, and other extended family. This shows that the benefits of a single individual migrating spread beyond the household he or she was living in at the time, with extended family benefiting from these remittances as well. The mean remitter sends remittances to 1.25 distinct groups of people, with the mean remittance-receiving household in Tonga receiving remittances from 1.22 people. However these means are the result of a few individuals sending or receiving remittances to or from 3 people – the median remitter only sends remittances to one person, and the median remittee only receives remittances from a single source, just not necessarily a former household member.

## **7. Why might remittances be spent differently from other forms of income?**

The development impact of remittances depends on their sustainability and what remittances are spent on. Many studies have looked to see if remittances are spent differently from other sources of income. One reason remittances might be spent differently is that migrants send remittances in response to specific events, or conditional on certain actions being taken. Remittance receivers in Tonga reported that 66 percent of all remittance transactions received were earmarked for a special purpose. The main purposes were the *misinale* (a once-a-year gift made to the church, see Puloka (undated))

accounting for 33 percent of special purpose remittances, payment of school fees (28 percent), and funeral expenses (14 percent). Remittances received for funeral expenses can be considered a form of insurance, and therefore will be spent differently than an increase in general household income. Remittances sent for other special purposes will only alter spending patterns compared to the same increase in household income if the conditions placed on them are binding, or if the fact that they are received as remittances increases the cost of certain expenses. This might be the case for misinable payments and schooling, with families receiving remittances expected to pay more.<sup>13</sup>

A second reason that remittances may be spent differently than other sources of income is that households view them as being more temporary in nature. Standard economic theory suggests that households will save a larger fraction of transitory income (or invest it in schooling and housing) than they would for permanent income. However, the cross-sectional nature of existing remittance surveys provides us with very little information on how households expect remittances to vary over time, and whether these expectations match those of the migrants.

Our survey asked migrants what they thought the percent chance was that they would remit in one year's time if they were still in New Zealand. This was followed by similar questions for five and ten year's time. Similarly, the head of the household that the migrant had been a part of was asked what he or she thought was the percent chance that

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<sup>13</sup> This may be because families with migrants are expected to contribute more to local public goods since having a migrant member is seen as a source of wealth, as well as that migrant members planning on returning may be expected to contribute to local public goods while away, so that the family merely acts as an intermediary between the migrant and the community.

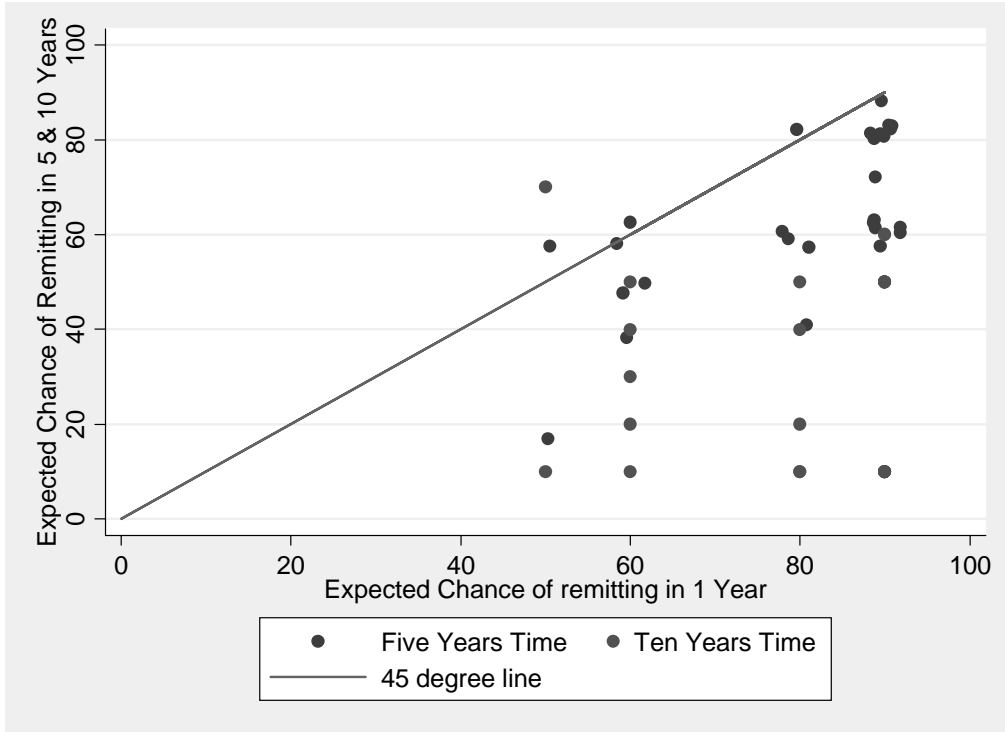
the migrant would remit in one, five and ten years time if they were still in New Zealand. We were able to match 28 migrants to their remaining family members. Table 3 shows the average percent chance reported for different periods. On average migrants and their families have very similar expectations: both have high expectations of remittances occurring one year out, but lower expectations of remittances occurring in five and ten years. That is, many remittance receivers believe that remittances will be a rather short-term source of income.

**Table 3: Mean expected chance of remitting/receiving remittances**

	Migrants	Remaining Household
In one year's time	79.6	78.1
In five years' time	63.7	68.3
In ten years' time	31.5	36.9

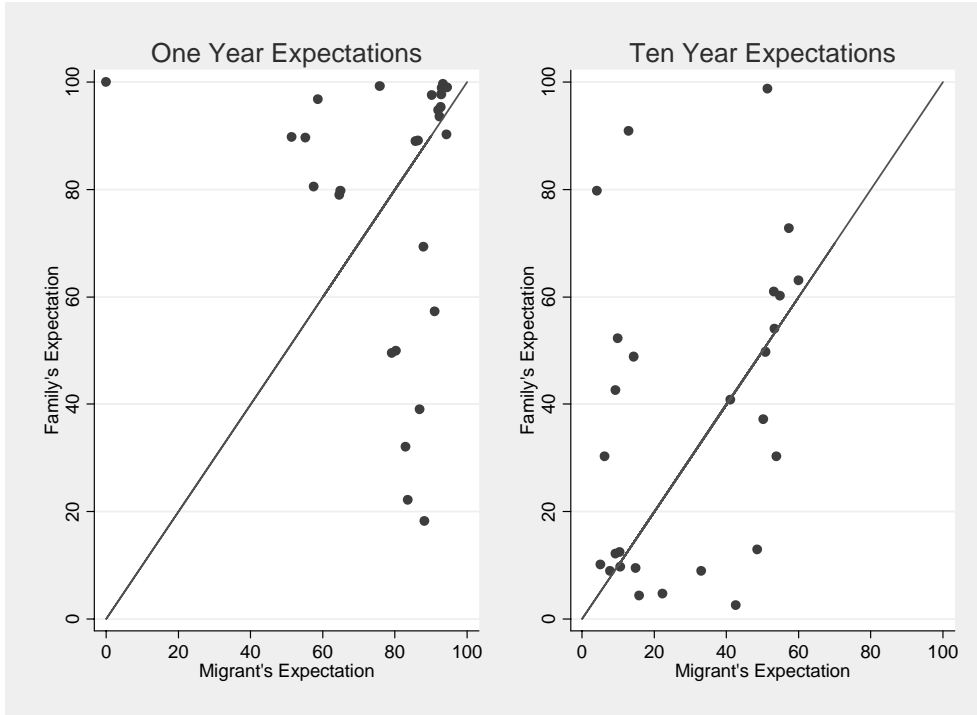
Not only does the average expectation of receiving remittances decline over time, but the expectation declines for almost every single family. Figure 7 shows that families with higher expectations of receiving remittances in one year also have higher expectations of receiving remittances in five and ten years, but that the percent chance of receiving is almost always less than the one year out expectation.

**Figure 7: Expectations of receiving remittances decay over time**



However, although on average migrants and their families have similar expectations, when we look at the matched pairs, a very different pattern arises. Figure 8 shows the match between migrant and family expectations for remittances in one year and in ten years. There is a much looser relationship between expectations one year out than ten years out: the rank-order correlation is 0.27 for one year (insignificantly different from zero) and 0.43 for ten years (significantly different from zero at the 5% level). At one year out, there is a group of migrants who have very high expectations of remitting, but whose families have low expectations of receiving remittances, and another group whose families expect remittances, but who don't expect to be sending them.

**Figure 8: Migrants and their families differ in remittance expectations**



This difference between the remittance expectations of migrants and their families one year out may reflect uncertainty over how long it will take the migrant to get settled in their new country and start earning sufficient income to send remittances. Regression of the difference between the family's expectations and the migrants expectations on characteristics of the migrant finds the family to have higher expectations than the migrant when the migrant is currently unemployed, and when the migrant states there is a high probability of losing their job in the next year, and a low probability of being employed in one year's time. However, these correlates are only suggestive, as with the small sample size of matched observations, no explanatory variables were significant in the regression.<sup>14</sup> In contrast, expectations are much more aligned 10 years out – this is

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<sup>14</sup> I also tried regressing the difference and absolute difference in expectations on age, education, sex, marital status, past income in Tonga, current income in New Zealand, the difference in income, and the difference in employment status. These variables were tried one by one, and also in groups. Current

sufficiently long enough for migrants to have become established and to have sorted out a good job.

Note that both migrants and their families have lower expectations of remittances being sent in 10 years' time than they do in one year's time. This decay in the probability of sending remittances suggests that remittances are viewed as a rather transitory form of income, which suggests that receiving households should save or invest a higher proportion of the income received from remittances than they would from higher wage income. Nevertheless, this does not necessarily mean that the level of remittances received by Tonga from this group of Tongan migrants will decay over time – it may be the case that falling probabilities of remitting are accompanied by higher amounts sent when remittances actually do occur. Most existing studies of remittance decay are cross-sectional in nature, and thus not able to capture these dynamic aspects.<sup>15</sup>

## **7. Conclusions**

Migration and remittances are of large importance to a number of Pacific Island nations. This lecture has attempted to show that even though these countries currently receive a lot of remittances, there is still scope for further remittance growth due to high costs of

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unemployment had the largest economic effect (associated with a 23 percent gap in expectations) and the highest t-statistic (1.4) in this regression.

<sup>15</sup> Connell and Brown (2005) survey several studies of remittance decay in the Pacific and conclude there is little statistically significant evidence for remittance decay. There are two main concerns with many of these cross-sectional studies. The first is that they may rely on community networks to obtain a sample of migrants, so that only migrants who remain tied to their communities (and hence more likely to continue remitting) appear in the sample. If more recent migrants are more likely to rely on membership of these ethnic networks, this will result in a systematic bias against finding remittance decay. Secondly, these studies are generally unable to control for return migration. If individuals who are less successful in the migrant destination are more likely to return, then the only migrants in the sample who have been in the host country for a long period of time are successful migrants who can send large amounts of remittances.

sending money. Expansion of ATM services and provision of information on exchange rate commissions and remittance options available seem promising avenues for lowering these costs.

I have also highlighted some aspects of remittances which may not be so easily seen in traditional surveys. Remittances occur as goods as well as cash, are often accompanied by sizeable reverse flows, and, at least in the Pacific case, are sent to the extended family in addition to direct household members. Matching migrants to their remaining household members showed that both groups expect the likelihood of remittances occurring to decrease with time overseas, with more concurrence in expectations in the long term than in the short term. These findings are drawn from a rather small sample of matched migrants, and so in future research it will be very useful to see whether they hold for larger samples and migrants from other countries.

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