Pacific Islands
At Home & Away
Expanding Job Opportunities for Pacific Islanders Through Labor Mobility

September 2006

Poverty Reduction and Economic Management Sector Unit
East Asia and Pacific Region
ACRONYMS AND ABBREVIATIONS

ACP: African, Caribbean, and Pacific grouping
ATM: Automated teller machine
AusAID: Australian Agency for International Development
AWOL: Away without leave
CSWAP: Canada’s Seasonal Agricultural Workers Program
EPA: Economic Partnership Agreement
EU: European Union
FARMS: Foreign Agricultural Resources Management Service (Canada)
FSM: Federated States of Micronesia
GDP: Gross domestic product
HRDC: Human Resources Skills Development Canada
ILO: International Labour Organisation
IOM: International Organization on Migration
NZAID: New Zealand Agency for International Development
PACER: Pacific Agreement on Closer Economic Relations
PIC: Pacific island country
PICTA: Pacific Island Countries Trade Agreement
PMC: Pacific member country
PPP: Purchasing power parity
RMI: Republic of the Marshall Islands
SAWS: Seasonal Agricultural Workers Scheme (United Kingdom)
SPC: Secretariat of the Pacific Community
TMP: Temporary movement of persons
UFCW: United Food and Commercial Workers (Canada)
UN: United Nations
WHM: Working holiday maker

Vice President: James W. Adams, EAPVP
Country Director: Xian Zhu, EACNF
Sector Director: Homi Kharas, EASPR
Team Leader: Manjula Lathria, EASPR
# TABLE OF CONTENTS

Acknowledgments ........................................................................................................... i
Foreword .............................................................................................................................. ii
Executive Summary ............................................................................................................. iii

Chapter 1. Mission Possible: a Framework for Policy Action ............................................ 1
  Section 1.1 Introduction ................................................................................................. 1
  Section 1.2 Special Challenges Facing Small Island States ......................................... 2
    Cost of Size and Location ......................................................................................... 2
    Market Size .............................................................................................................. 3
    Geographic Isolation ............................................................................................... 4
    Cost of Vulnerability ............................................................................................. 4
  Section 1.3 The Solution: Economic Integration .......................................................... 6
    The Case for Labour Market Integration ................................................................ 8
  Section 1.4 Analytical Framework, Empirical Findings, and Policy Implications .......... 9
    Migrant-Sending Point of View (Pacific) .................................................................. 9
    Migrant-Receiving Point of View ........................................................................... 16
  Section 1.5 Summary and Conclusion ........................................................................ 21
    References ............................................................................................................... 23
    Notes ....................................................................................................................... 24

Chapter 2. The Young and the Restless: the Challenge of Population Growth ............... 27
  Section 2.1 Introduction ............................................................................................... 27
  Section 2.2 Population Projections .............................................................................. 28
    Mortality .................................................................................................................. 28
    Fertility .................................................................................................................... 29
    Migration ................................................................................................................. 30
    Scenarios ............................................................................................................... 33
    Results .................................................................................................................... 33
  Section 2.3 Formal Employment Projections ............................................................... 34
    Employment Projection Results ............................................................................. 37
  Section 2.4 Potential for Overseas Employment ........................................................... 38
  Section 2.5 Conclusion ............................................................................................... 40
    References ............................................................................................................... 41
    Notes ....................................................................................................................... 41

  Section 3.1 Introduction ............................................................................................... 42
  Section 3.2 Migration and Remittances in Fiji and Tonga ......................................... 43
    Background to Pacific Island Migration .................................................................. 43
    Fijiian and Tongan Migration .................................................................................. 45
    2005 Survey of Migrant Households and Remittances ........................................... 46
    The Fiji Sample ....................................................................................................... 46
    The Tonga Sample ................................................................................................. 46
    Sample Characteristics ......................................................................................... 47
    Migrant Households in Fiji and Tonga .................................................................... 47
Figure 3.10: Interdependencies Between Migration, Remittances, and Human Capital ........................................... 73
Figure 3.11: Percentage Change in Average Quintile Income ..................................................................................... 80
Figure 3.12: Percentage Income Share By Quintile .................................................................................................. 82
Figure 3.13: Inequality and Subjective Deprivation Measures ..................................................................................... 85
Figure 3.14: Average Wealth Index for Households ................................................................................................. 89
Figure 4.1: What is the Level of Ease in Finding Sufficient Seasonal Workers for your Enterprise? ...................... 102
Figure 4.2: What is the Availability of Seasonal Horticultural Workers in Your Region? ................................... 103
Figure 4.3: Have Seasonal Labour Shortages Prevented the Expansion of Your Enterprise? ............................ 103
Figure 4.4: What is Your Level of Interest in Employing Overseas Workers? ....................................................... 104
Figure 4.5: Seasonal Workers Currently Employed and Seasonal Workers Wanted by Month ............................ 105
Figure 4.6: How Administrative and Practical Posts Should be Recovered in Recruiting Overseas Workers ................. 107

List of Tables
Table 1.1: Central Case Cost Inflation Factors and Income Penalties................................................................. 3
Table 1.2: GDP Per Capita Variance Across Pacific Island Countries, about 1999 .................................................. 7
Table 2.1: Assumed Life Expectancies by Sex and Period ..................................................................................... 28
Table 2.2: Assumed Total Fertility Rate by Period: Gradual and Accelerated Fertility Declines ....................... 29
Table 2.3: Migration Assumptions: Net Migration Per Five-Year Period ............................................................ 31
Table 2.4: Scenarios: Combination of Assumptions ............................................................................................ 33
Table 2.5: Projected Population Change 2004-2029, Base Case (percentage) .......................................................... 33
Table 2.6: Employment and Working-age Population in Selected Pacific Island Countries ................................... 35
Table 2.7: Projections of Formal Sector Employment in Selected Pacific Countries, 2004 and 2015 .................. 37
Table 2.8: Potential Supply of Labour for Overseas Employment in 2004 and 2015, Population projections Base Case ........................................................................................................... 39
Table 3.1: Composition of Household Sample ......................................................................................................... 47
Table 3.2: Households with at Least one Migrant by Household Size ................................................................. 48
Table 3.3: Numbers of Migrants in Household, Intentions to Migrate, and Return-Migrants .............................. 49
Table 3.4: Migrants by Ethnic Group ..................................................................................................................... 50
Table 3.5: Education of Migrants .......................................................................................................................... 52
Table 3.6: Composition ofRemittances Received (2004 US$) .................................................................................. 56
Table 3.7: Channels Used for Cash Remittances (% of receiving households) ...................................................... 57
Table 3.8: Channels Used for Cash Remittances (% of receiving households) ...................................................... 57
Table 3.9: Presence of One or More Migrants by Household Value of Non-land Assets ....................................... 59
Table 3.10: Gender of Migrant and Remittances Received .................................................................................... 61
Table 3.11: Mean Remittances by Education of Migrants (all migrants) (in US$) ....................................................... 62
Table 3.12: Estimates of Total Remittances Received: Fiji and Tonga (2004) ......................................................... 63
Table 3.13: Composition of Income by Per Capita Income Quintiles (% total income) ........................................... 66
Table 3.14a: Estimated Effects of Migration and Remittances on Total Income* ................................................. 67
Table 3.14b: Estimated Effects of Migration and Remittances on Income sources* ............................................. 67
Table 3.15: Saving and Per Capita Income Quintile (2004 US$) ............................................................................. 70
Table 3.16: Household Saving by Remittances Recipients: Fiji by Ethnic Group .................................................. 71

Table 3.17: Estimated Effects of Migration and Remittances on Total Income* .................................................... 67
Table 3.18: Saving and Per Capita Income Quintile (2004 US$) ............................................................................. 70
Table 3.17: Saving and Remittances: OLS and Tobit Estimates ................................................................. 71
Table 3.18: Education of Household Adult Members ...................................................................................... 74
Table 3.19: Percentage of individuals over 14 years of age with more than 8 years of education ...... 75
Table 3.20: Schooling and Remittances Instrumental-Variable Probit Results: Fiji (p-values in brackets) .............................................................................................................................. 77
Table 3.21: Tertiary Education and Migration Probit Results: Fiji and Tonga (p-values in brackets) . 77
Table 3.22: Income Distribution: Mean levels by Quintile .............................................................................. 79
Table 3.23: Income Distribution: Percentage Shares by Quintile ................................................................. 81
Table 3.24: Subjective Required Cash Income vs. Actual Total Cash Income (Median US$, 2004) .. 83
Table 3.25: Measures of Inequality and Subjective Deprivation .................................................................. 84
Table 3.26: Wealth Index (principal components analysis results) ............................................................... 87
Table 3.27: Assets Ownership Mean by Wealth Index: Fiji and Tonga ....................................................... 88
Table 4.1: Levy You Would be Willing to Pay if Required .............................................................................. 107
Table 4.2 Would You be Willing to Provide Onsite Board and Lodging to Overseas Workers? ...... 108
Table 4.3: Comparing Seasonal Agricultural Labour Schemes ................................................................ 112
Table 4.4: Summary of Savings Potential for Off-shore Seasonal Workers .............................................. 122
Table 4.5: Modelling Additional Costs to Growers (all dollar amounts in AUD$) ...................................... 123

List of Boxes
Box 1.1: Population projections for Australia and New Zealand, 2004-2051 .............................................. 17
Box 4.1: Crop Loss Estimates Due to Labour Shortages in Australian Horticulture .............................. 101
Box 4.2: Social Impacts for Tuvaluan and I-Kiribati Seafarers ................................................................. 124
ACKNOWLEDGMENTS

This report was prepared by a team led by Manjula Luthria, senior economist in the World Bank's East Asia and Pacific Region. The lead authors were Manjula Luthria (Chapter 1), Ron Duncan from the University of the South Pacific (Chapter 2), Richard Brown from the University of Queensland (Chapter 3), and Peter Mares and Nic Macellam from the Swinburne University of Technology (Chapter 4). Other contributors to the individual chapters include Heather Booth, Guangyu Zhang, Maheshwar Rao and Fakavae Taomia (Chapter 2); and John Connell, Eliana Jimenez, and Gareth Leeves (Chapter 3).

The team is grateful for the valuable inputs received through discussions with individuals from the University of the South Pacific; the Australian National University; the University of Sydney; the University of Victoria, Wellington; the Australian Agency for International Development (AusAID); New Zealand Agency for International Development (NZAID); the Australian and New Zealand Treasury and Departments of Immigration and Foreign Affairs; and the United States State Department. Comments from Phil Martin (University of California, Davis), Martin Ruhs (University of Oxford), as well as informal discussions with individuals at the International Labour Organisation (ILO) and the International Organisation on Migration (IOM) on temporary movement of persons were very helpful. Important contributions were also received through useful information exchanges hosted by the Pacific Islands Forum Secretariat.

This work could not have been undertaken without the keen cooperation and support of key government agencies in Fiji and Tonga. Individuals from various government departments in these two countries contributed to ensuring that the quality of the data collection remained at the highest possible level. Discussions at various fora with Pacific island governments as well as other stakeholders in the Pacific region have contributed immensely to this report.

During the internal reviews of this report at the World Bank very helpful comments were received from Alan Winters, Indermit Gill, Aaditya Matoo, David McKenzie, Ana Revenga, Rekha Menon, Irena Omelaniuk, Sanket Mohapatra, and Gaurav Datt. Evelyn Ng provided excellent research assistance and Elisabeth Mealey infused creativity in overall design and publishing. Sheldon Lippman provided editorial review and made valuable improvements to the report. Jane Sprouster helped coordinate multiple tasks related to production and photographs were provided by Trevor Watson and Sofia Bettencourt.

The guidance and support of peer reviewer, Dilip Ratha, was instrumental in shaping this report. This report also benefited from the overall supervision of Xian Zhu, Sanjay Dhar, and Homi Kharas.
FOREWORD

Migration has emerged in recent years as an important development issue. There is a growing awareness of how it can improve the welfare of migrants and their dependants as well as the economies of host and sending countries. By some estimates the gains to global welfare from the liberalisation of the movement of people could outweigh the gains from any remaining trade liberalisation. Perhaps, nowhere is this more true than in the Pacific Region, characterised as it is by small, isolated islands trying to find economically viable ways to compete in a globalizing world.

The World Bank has launched a program to expand the knowledge base in this area by devoting the attention of staff in the central research units as well as regional departments to understanding the complex set of issues relating to migration—such as remittances, social protection and governance, the temporary movement of persons, and the links with trade and the financial sector—in an effort to identify policies towards migration that are pro-development. This report has benefited from the insights of these various efforts and its findings reinforce evidence on the positive impact of migration from other parts of the world.

Given the importance of labour mobility to the Pacific, and the integral role in poverty alleviation that migration can play, we hope this report elevates the discussion to a serious level in the Region. In the course of preparation of this report, constructive dialogue with various stakeholders has already begun to take shape, and the support of various donor and international agencies has proven to be critical. The World Bank stands ready to facilitate further meaningful dialogue on this issue and to assist with integration of labour markets in the Pacific Region.

Homi Kharas
Chief Economist and Sector Director,
Poverty Reduction and Economic Policy Unit,
East Asia and Pacific Region, World Bank
EXECUTIVE SUMMARY

The island economies in the Pacific are small nation states located at a considerable distance from large economies and each other in the vast Pacific Ocean. Their land mass, population size, ethnicity, and natural endowments vary considerably. Most Pacific member countries (PMCs) in this region receive very high amounts of aid per capita but economic growth has proved elusive. With persistently high population growth and the youth population reaching 40 percent, finding productive employment is becoming more challenging. Greater labour mobility would expand the employment options available to Pacific islanders, but it is currently limited and skewed in favour of skilled workers.

This report is motivated by the need for jobs for the Pacific islanders who cannot source them domestically. Even as the business environment improves, employment creation will be limited by the challenges of demography, size, and geography. This report’s main purpose is to examine the economic arguments—analytically and empirically—in favour of greater labour mobility, by addressing three fundamental questions.

What is the extent of demographic pressures facing the Pacific?
The demographic projections presented in the report under varying scenarios of fertility and mortality suggest that population growth in the Pacific islands is expected to remain high in the near future. Melanesia in particular, which is characterised by high fertility rates, low formal sector employment, and very limited migration options, will generate the highest proportion of excess labour. For example, in Solomon Islands and Vanuatu where formal sector employment is already among the lowest in the region, the working-age populations are expected to increase by another 30 percent within the next decade. While some domestic employment opportunities will also be created, it would still leave nearly 90 percent of the populations of these countries outside the formal sector. This has far-reaching repercussions domestically as well as for the wider Pacific Region.

The flip side of this story is that there will be an increasingly larger pool of young people from which industrialised countries with labour shortages will be able to draw. Low and declining fertility rates, and the ageing of the ‘baby boomers’ in many industrialised countries are giving rise to concerns regarding a growing stock of dependants (young and old) relying on a shrinking work force. This coincidence of excess supply in some regions and excess demand in others creates the backdrop for potentially mutually beneficial movement of labour in the region.

What has been the development impact of remittances on migrant-sending households and communities?
Experiences from other parts of the world indicate that migration can contribute to social stability as well as economic development. Through empirical analysis of data from remittance-recipient households in two Pacific countries, Fiji and Tonga, this report’s findings resonate with the global findings that migration and remittances have had a positive impact on migrant-sending countries.
Remittances, which allow the ‘transnational’ family to earn abroad and consume at home, have served an important social protection role by providing access to a steady and reliable source of income for consumption in poor, vulnerable households. The results also show that remittances play an important role in improving income distribution. The poorest 40 percent of the population’s share of cash income was found to increase while the share of the richest 20 percent fell in Fiji and Tonga. Remittances were also found to have a positive impact on poverty alleviation—all measures of relative deprivation used in the report improve after taking remittances into account. Interestingly, whereas Tonga suffers from more relative deprivation than Fiji before remittances are included, deprivation on the main islands in Tonga is reduced by remittances to such an extent that the situation is better than both rural and urban Fiji.

Remittances also induce higher saving in both Fiji and Tonga and there is some evidence of remittances stimulating business activities in Tonga. Another relevant finding is that informal channels are still widely used by migrants to transfer cash home, which is not surprising given the high cost of remitting through formal channels. Considering the size of remittances flowing into Pacific households, a reduction in the transaction cost of making financial transfers would lead to a substantial increase in the net remittances received. A follow-up study is underway to identify measures to lower the cost of remittance transfers.

Another important finding from household-level data is that remittances are associated with better secondary-level educational attainment (by alleviating the budget constraint to education), while having a migrant in the household increases the likelihood of other household members acquiring post-secondary education (by inducing greater investment in education). These findings indicate that larger investments in education, as the result of increased remittances, could augment the supply of skilled workers in source countries by increasing both the incentive and ability to finance education. In the same spirit, recent policy announcements to establish aid-funded technical colleges and upgrade existing institutions in the Pacific should be welcomed as it would also help in the ‘up-skilling’ of migrants. Simultaneously, some countries in the Pacific should re-examine their objections to opening up their own labour markets to skilled labour from the region. These restrictions often impose self-inflicted costs on small countries because skilled migrants help to create jobs and strengthen institutions in the local economy, not destroy them.

If migration is to be used as an instrument to foster greater regional stability and achieve stronger pro-poor outcomes, migration options need to be extended beyond the skilled and elite to the poor and unskilled who are unlikely to find such opportunities domestically. Evidence from other parts of the world, where international mobility for unskilled labour exists, points to its positive impact in improving social equity in sending countries, reducing social tensions, and creating a larger constituency for economic growth and governance reform.

Is it possible to design migration programs that balance the benefits of migration with the concerns of sending and receiving countries?

Understandably, destination countries are reluctant to open their borders permanently to large numbers of unskilled workers for fear of creating a fiscal burden or socio-political tensions. The analysis in the report therefore draws on global experience with managed temporary worker schemes for unskilled labour and concludes that well-managed programs can be designed to overcome most concerns quite successfully. Typically, migration between economically unequal partners is best placed within a bilateral framework allowing a high degree of freedom to customise its design and oversight.
With due attention to the design of incentives, it is possible to structure bilateral schemes that are successful in delivering economic gains while mitigating the economic and social costs for sending and receiving countries. In particular, attention to the ‘4 Cs’ that form the backbone of successful schemes will be critical:

- **Choice of workers to ensure that hiring is skill-appropriate rather than hiring over-qualified workers who are likely to use the scheme as a stepping stone;**

- **Circular movement of workers to allow good employees to return in subsequent years rather than be offered a one-time only chance at off-shore employment thereby reducing the incentive to violate the arrangement;**

- **Cost-sharing on travel-related costs with employers so that fixed costs borne by migrants are not so large that they make overstaying attractive; and**

- **Commercial viability so that the scheme remains private-sector driven and reflects labour market conditions in host countries rather than by arbitrary quotas that become outdated if labour market conditions in destination countries change.**

Building awareness of the importance of these features through pre-departure information and training sessions would go a long way in mitigating the risks of noncompliance as well as worker exploitation and abuse.

These features have universal applicability, and this report recommends the exploration of pilot schemes between Pacific populations and other nations with an economic need for unskilled labour and a development interest in the Pacific Region. Given that the Pacific countries have the strongest interest in ensuring economic as well as socio-political stability in the region, it would make sense for such small experiments with temporary managed programs to start within the region. For that reason the report looks closely at a small horticultural region in Australia to find ways to transfer lessons from global best practice in temporary worker programs.

But this isolated case study cannot present the total picture of regional demand. Besides horticulture, there are likely to be several sectors in other neighbouring countries where greater integration of regional labour markets could be mutually beneficial. This report does not try to identify them or make prescriptions about where regional labour should be deployed. Instead, it takes the view that it is best left to the private sector to identify these gaps and grapple with viable business options. Governments should take responsibility for creating a facilitating environment to allow markets to work in an efficient manner, while remaining attentive to issues of social equity.

While labour mobility alone will not make the Pacific member countries prosperous, it could make a significant contribution towards enhancing economic and social stability in the region. Global evidence also indicates that trade liberalisation is not a substitute for the liberalisation of labour; hence, the latter must be pursued in its own right. Indeed, the benefits from the liberalisation of the movement of labour may far outweigh the benefits from further trade liberalisation for some Pacific island economies.
Notes

1  Nine Pacific island nations (population and GDP per capita in 2004) are members of the World Bank Group: in Melanesia, Fiji (840,800 and US$3,098), Solomon Islands (465,800 and US$513), and Vanuatu (207,300 and US$1,472); in Micronesia, Kiribati (97,800 and US$633), Republic of Marshall Islands (61,200 and US$1,803), Federated States of Micronesia (109,700 and US$1,786), and Palau (20,000 and US$6,350); and in Polynesia, Samoa (183,700 and US$2,030) and Tonga (102,000 and US$2,087). In addition, Papua New Guinea also borders the Region with 5.7 million people.

CHAPTER 1. MISSION POSSIBLE: A FRAMEWORK FOR POLICY ACTION

Labour migration is on the rise worldwide notwithstanding stringent restrictions on international labour mobility that impose a far greater burden on the global economy than trade restrictions. In recognition, government policy on migration needs to explicitly incorporate the economic impact of migration to both host and sending nations, in addition to security and social issues that traditionally dominate such assessments.¹ The purpose of this report is to enable a more meaningful discussion of the economic issues of migration in the Pacific context than has been possible to date.

SECTION 1.1 INTRODUCTION

The potential benefits of migration are especially important for small states and islands. The high costs facing small remote states may be well-known to policymakers, but what is new is the emerging recognition that existing prescriptions have been unable to mitigate these costs. Trade preferences, which were designed to provide access to markets until small producers gained competitiveness, have instead perpetrated inefficiencies in production and, in any case, are in question in the global trading environment. Similarly, aid, which has helped build infrastructure and deliver important services to recipients, may also have only limited ability to mitigate the disadvantages facing small states. If small states are to find ways to integrate globally by diversifying their economies in order to reduce economic volatility, then, along with efforts to improve their domestic business environments, the export of labour to deliver services to industrialised countries needs to be seriously considered as an option.

Of course, the movement of labour is not going to solve all the problems of the Pacific. No one policy instrument is ever a 'silver bullet'; and in the spirit of export diversification, no one sector for export should be expected to carry the burden of future development for the nation. However, any chance to broaden the export base and reap positive externalities for all citizens needs to be encouraged through the development of sound export strategies as well as the reduction of import barriers in destination countries. While the economist’s favoured Heckshir-Ohlin model predicts that trade in goods could be a substitute for the movement of people (due to embodied factors of production) and could result in factor price equalisation across borders, in reality this has not happened. However, productivity adjusted wages do seem to be converging, and evidence shows that these differences in productivity are highly location specific (World Bank, 2006). This means that a ready stock of migrants would be able to raise their incomes by moving to high-paying locations. And if these new locations happen to be facing worker shortages, this creates an even more favourable scenario for mutually beneficial movement of labour.

This report is an attempt to look at the economic case for mutually beneficial movement of labour in the Pacific Region.² The movement of people, however, cannot be approached like the movement of goods since the movement of labour creates not just economic but also significant intended and unintended social consequences for both receiving and sending countries. Recognizing the complexity of this issue, this report attempts to shed light on some aspects of the economics of labour mobility through new research that presents empirical and analytical findings, while drawing on other studies.
and discussions to highlight the broader social consequences of the movement of people.

This report focuses on three main questions:

1. Are there demographic pressures facing the Pacific Region that set the stage for increased labour mobility?
2. Where labour mobility exists, what has been the economic impact on households in migrant-sending countries through the receipt of remittances?
3. If labour mobility was to be enhanced in the region, what sorts of migration programs could be designed to balance the benefits and concerns of sending and receiving countries?

Chapters 2, 3, and 4 of this report deal with the above three questions respectively. Chapter 1 is organised as follows:

Section 1.2 presents evidence of the challenges facing small island states and highlights the importance of economic integration in meeting those challenges.

Section 1.3 outlines the case for labour market integration in particular and presents evidence of the welfare impact of labour movements globally and in the Pacific Region.

Section 1.4 lays out the underlying framework for understanding the complex aspects of labour mobility in the Region. It provides a synthesis of the main empirical findings and policy implications of this report, positioning them in the global findings and literature where possible and relevant.

SECTION 1.2 SPECIAL CHALLENGES FACING SMALL ISLAND STATES

The issues that small states face have not received steady and rigorous attention until recently. Some 20 years ago small states were considered to be bestowed with special advantages, such as endowments of natural resources and small homogenous populations that allowed for political consensus to be reached easily and for adaptation to be made more manageable (Srinivasan, 1986). Even the presence of higher risk premiums for private investment was not considered a problem, as it was thought to be compensated for by higher aid flows. Their openness to trade was also considered an asset that positioned them for higher growth. Overall the message was that the lessons from the growth experience of other developing countries could be easily applied to small states (Easterly and Kray, 1999; Winters and Martin, 2004); and examples such as Hong Kong, Singapore, Luxembourg, Switzerland, and Qatar were cited to support these views.3

With time and experience, our understanding of these issues has progressed, in the process of overturning some of these views. We know now that greater openness to trade is also accompanied by greater volatility in small, undiversified economies that are price takers. Natural resources, unfortunately, can be more of a curse than a blessing as small populations typically have a difficult time avoiding capture by special interests since interest groups can be especially influential. We also know now that aid and private investment are not interchangeable, and that aid may crowd out investment and possibly undermine the incentive framework in some cases.

Efforts to quantify the costs of these constraints have highlighted the costs of size and location, as well as the significant costs of vulnerability to natural disasters that can impose economic volatility on the citizens of small states.

Cost of Size and Location

The price of smallness manifests itself in the form of higher costs for transporting exports and imports,
higher utility costs, and higher wages and rents (Winters and Martin, 2004). Given the price-taker status of small countries in world markets, these cost premiums are hard to pass on to customers, which implies that the only way these economies can export at world prices is if some factor of production accepts lower returns than it would get in larger economies. Winters and Martin (2004) have calculated such ‘income penalties’ and found that capital would earn negative returns if it were invested in a micro-economy and had to bear the cost of local inefficiencies. Similarly, even if wages were zero in a micro-economy, total costs would still exceed world prices (Table 1.1). This is true for manufacturing as well as a service industry such as tourism.

Why are the costs of smallness so large? Limited market size and geographic isolation have a lot to do with it.

**Market Size**

Market size is defined as the scale of economic activity over which agents can contract. Usually national borders define the scope of this contractual space. The larger this space the greater the potential for reaping economies of scale and the greater the scope for specialisation. Reaping economies of scale and scope requires specific investments in physical and human capital, as well as marketing channels, which are constrained when the scale of economic activity is small. This is true not only when producing and exporting goods, but also when providing government services—whether public utilities or general government administrative functions where indivisibilities in certain services can increase the overall size of the public sector.

<table>
<thead>
<tr>
<th>Table 1.1: Central Case Cost Inflation Factors and Income Penalties</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Electronic assembly</strong></td>
</tr>
<tr>
<td>Cost inflation factor</td>
</tr>
<tr>
<td>Income penalty (% of median-country’s income flow)</td>
</tr>
<tr>
<td>all domestic supplies</td>
</tr>
<tr>
<td>factors and services</td>
</tr>
<tr>
<td>value added</td>
</tr>
<tr>
<td>capital</td>
</tr>
<tr>
<td>labour</td>
</tr>
</tbody>
</table>


Of course, the moot question is how much does domestic market size matter if the country has open trade policies, which small countries do generally adopt? It appears to matter quite a lot, as international fragmentation seems to affect trade and capital flows, and consequently price equalisation. McCallum (1995) found that trade between Canadian provinces was 20 times larger than with an equidistant US state (despite the fact that the United States–Canada border is perhaps the easiest to cross, given similarities in economic development as well as broad cultural characteristics). Similar evidence from Engel and Rogers (1996) found that crossing a border is the economic
equivalent of adding thousands of miles to the distance between cities. Parsley and Wei (2001) estimate that crossing the US–Japan border adds 43,000 trillion miles to the process of price convergence between cities.

These ‘border effects’ could also translate into a negative impact on output levels—and hence, possibly growth rates to transition into higher income levels—as trade has significant effects on income. An increase in trade of 1 percent raises income by 0.33 percent over 20 years (Frankel and Romer, 1999). As new small states emerge, so do new transaction costs, which seem to limit both foreign and domestic trade and, hence, income in the long run. It is possible that the increased transaction costs or border effects could be compensated for by the positive impact of sovereignty if the latter prompted independent nations to adopt policies superior to the ones that may have been imposed on them earlier. The broad empirical evidence from Africa, the Caribbean, and the Pacific however indicates that countries typically do not experience acceleration in their growth rates after independence. Furthermore, the evidence from the Caribbean suggests that the old independent states are the poorest while the dependants are the richest (Hausmann, et al., 2002). This suggests that the costs of sovereignty may not be trivial.

**Geographic Isolation**

In addition to market size, distance from markets or the main centres of economic activity plays a role in inflating the cost disadvantages faced by small countries. Remoteness or isolation from trading partners, as well as main economic hubs, exacerbates the disadvantages of small market size that prevent specialisation.

Most island countries that are small, particularly in the Pacific Region, are also remotely located. In empirical studies, it therefore becomes hard to disentangle the size effect from the isolation effect. Winters and Martin (2004) are able to get around this by introducing a distance variable into their regression equations for estimating costs. For sea freight costs, as well as the cost of passenger travel, distance turns out to have a significant effect. Given the large percentage of imports in the consumption basket and the need to export products to larger and faraway markets (particularly for the Pacific where inter-island trade is negligible), the higher cost of sea freight poses a major disadvantage to Pacific islanders. The high cost of passenger travel to distant locations also limits the ability of small islands to sell tourism services to the rest of the world. Another type of transaction cost faced by businesses in small states results from the disruption of services, such as utilities or the lack of skilled workers. If disruptions and skill shortages are true of small countries in general, then those small countries that are surrounded by miles of ocean—as is the case in the Pacific—must be affected much more.

**Cost of Vulnerability**

Small countries, and small island countries in particular, tend to be more susceptible to natural shocks—that is, to both natural disasters (cyclones and other storms, floods, droughts, volcanic eruptions, and earthquakes) as well as volatile rainfall patterns. Brown et al. (no date) try to measure how vulnerability to natural elements translates into macroeconomic volatility. Figures 1.1a and 1.1b depict indices of natural disaster frequency and rainfall volatility for Pacific member countries (PMC).

The data show that countries vary considerably in terms of their susceptibility to natural shocks, with Vanuatu, Fiji, and the Solomon Islands being the most susceptible. Also, susceptibility to natural disasters and general rainfall volatility are not positively correlated. Kiribati has by far the most volatile rainfall but is not so prone to other disasters. Less climatically volatile countries include the Federated States of Micronesia (FSM), Marshall Islands, and Tonga.
In comparing the Pacific member countries to the control countries in terms of the same two indices, it seems that only Mauritius and Swaziland have rainfall volatilities comparable to the Pacific member countries, while only Mauritius and St. Vincent and the Grenadines have experienced a comparable number of natural disasters.

While the Pacific member countries share similarly high rainfall volatility with other island states (Figure 1.2), island countries have rainfall volatilities which are twice as high as other developing countries, including other small economies. It would therefore appear that many of the Pacific member countries are more susceptible to both natural disasters and volatile rainfall patterns than most other developing countries.

Note. This disaster index does not include floods or droughts, hence the rankings are slightly changed for the PMCs. Also, Australia and Iceland, being aid donors rather than recipients, will not have any registered disasters by definition.
Does this vulnerability translate into greater volatility of agricultural production and aggregate production (gross domestic product)? Time series data on a country-by-country basis show that natural disasters, including rainfall shocks, may have adverse impacts on both the rural sector and the overall economy. As an example, growth in food production and aggregate production mirror each other quite closely in Fiji, and both appear to be adversely affected by natural shocks given that troughs in production coincide with the incidence of shocks. Overall, the evidence suggests that both the rural sector and the aggregate economy in the Pacific member countries can be affected by natural shocks, but the degree of susceptibility and vulnerability differs across countries.

SECTION 1.3 THE SOLUTION: ECONOMIC INTEGRATION

Unfortunately neither size nor geography can be altered by policies. To overcome the adverse impacts of these unfavourable circumstances, the Pacific member countries need to devote extra attention to ensuring that the cost of doing business remains as low as possible through improvements in the regulatory framework; building resilience to natural hazards in infrastructure; and, most importantly, institutional quality. Some of these changes can be achieved at relatively low cost while others will certainly require more fundamental long-term changes that should remain a priority for PMC governments and their development partners.

Alongside the domestic reform agenda, tighter economic integration can partially compensate for unfavourable size and geography as it would reduce some of the ‘border costs’ faced by small isolated economies quite substantially. Bertram (2004) empirically tests the hypothesis that the per capita gross domestic product (GDP) of small island economies and their growth over time are explained to a large extent by two variables: the political-economic linkages tying each island to a corresponding metropolitan patron in the core of the world system, and the GDP level in the metropolitan patron economy (Bertram, 2004). The results show that a US$1.00 increase in the per capita GDP of the metropolitan patron economy increases per capita GDP of its linked economies by US$0.44.

The study also points out that, for a sample of 22 Pacific island economies (Table 1.2), sovereign independent states had an average per capita GDP of only US$1,229 compared with US$2,187 for territories in free association with the United States or New Zealand (Cook Islands) and US$22,615 for territories that were politically integrated with France or the United States (such as French Polynesia and Hawaii).

The reasons for this wide variance probably reflect the issues of limited market size, economies of
scale, and specialisation that independence poses for small economies, coupled with the large fiscal transfers and provision of several government services where there is political integration with a larger economy.

While political integration for the Pacific island countries is not a realistic option, the critical question is whether aspects of economic integration that are associated with political integration can be replicated in a way that alleviates some of the constraints that size imposes in order to deliver the positive income benefits to their citizens. Labour market integration should be examined seriously in this context.

Table 1.2: GDP Per Capita Variance Across Pacific Island Countries, about 1999

<table>
<thead>
<tr>
<th>Country</th>
<th>GDP per capita, PPP estimates, US$</th>
<th>Patron economy</th>
<th>Patron economy’s GDP per capita, PPP estimates 1999</th>
<th>Political status of the island territory</th>
</tr>
</thead>
<tbody>
<tr>
<td>American Samoa</td>
<td>8,000</td>
<td>USA</td>
<td>36,200</td>
<td>Integrated</td>
</tr>
<tr>
<td>Cook Islands</td>
<td>5,000</td>
<td>New</td>
<td>17,700</td>
<td>Associated</td>
</tr>
<tr>
<td>Fiji</td>
<td>7,300</td>
<td>Australia</td>
<td>23,200</td>
<td>Independent</td>
</tr>
<tr>
<td>French Polynesia</td>
<td>10,800</td>
<td>France</td>
<td>24,400</td>
<td>Integrated</td>
</tr>
<tr>
<td>Guam</td>
<td>21,000</td>
<td>USA</td>
<td>36,200</td>
<td>Integrated</td>
</tr>
<tr>
<td>Hawaii</td>
<td>34,312</td>
<td>USA</td>
<td>36,200</td>
<td>Integrated</td>
</tr>
<tr>
<td>Kiribati</td>
<td>850</td>
<td>Australia</td>
<td>23,200</td>
<td>Independent</td>
</tr>
<tr>
<td>Marshall Islands</td>
<td>1,670</td>
<td>USA</td>
<td>36,200</td>
<td>Associated</td>
</tr>
<tr>
<td>Micronesia, FSM</td>
<td>2,000</td>
<td>USA</td>
<td>36,200</td>
<td>Associated</td>
</tr>
<tr>
<td>New Caledonia</td>
<td>15,000</td>
<td>France</td>
<td>24,400</td>
<td>Integrated</td>
</tr>
<tr>
<td>Niue</td>
<td>2,800</td>
<td>New</td>
<td>17,700</td>
<td>Associated</td>
</tr>
<tr>
<td>Nauru</td>
<td>5,000</td>
<td>Australia</td>
<td>23,200</td>
<td>Independent</td>
</tr>
<tr>
<td>Northern Marianas</td>
<td>12,500</td>
<td>USA</td>
<td>36,200</td>
<td>Integrated</td>
</tr>
<tr>
<td>Palau</td>
<td>7,100</td>
<td>USA</td>
<td>36,200</td>
<td>Associated</td>
</tr>
<tr>
<td>Papua New Guinea</td>
<td>2,500</td>
<td>Australia</td>
<td>23,200</td>
<td>Independent</td>
</tr>
<tr>
<td>Samoa</td>
<td>3,200</td>
<td>New</td>
<td>17,700</td>
<td>Independent</td>
</tr>
<tr>
<td>Solomon Islands</td>
<td>2,000</td>
<td>Australia</td>
<td>23,200</td>
<td>Independent</td>
</tr>
<tr>
<td>Tokelau</td>
<td>1,000</td>
<td>New</td>
<td>17,700</td>
<td>Integrated</td>
</tr>
<tr>
<td>Tonga</td>
<td>2,200</td>
<td>New</td>
<td>17,700</td>
<td>Independent</td>
</tr>
<tr>
<td>Tuvalu</td>
<td>1,100</td>
<td>Australia</td>
<td>23,200</td>
<td>Independent</td>
</tr>
<tr>
<td>Vanuatu</td>
<td>1,300</td>
<td>Japan</td>
<td>24,900</td>
<td>Independent</td>
</tr>
<tr>
<td>Wallis and Futuna</td>
<td>2,000</td>
<td>France</td>
<td>24,400</td>
<td>Integrated</td>
</tr>
</tbody>
</table>


Recent commentary on the challenges and opportunities for growth in the Pacific has highlighted the relative success of two countries in the Region, Samoa and Cook Islands, which have been able to register sustained growth (AusAID, 2006). In looking for best practice examples in whose footsteps other small islands should follow the report points towards Mauritius. While it is always dangerous to look for common themes across countries—as each would have their own idiosyncratic factors that
have led to their success—it would be hard to deny that each of these three countries present a strong case for labour mobility. Samoa has had a long history of migration into New Zealand through the treaty of friendship for over 30 years, Cook Islands is in free association with New Zealand, and the Mauritius miracle (thus far unexplained by purely economic factors) may well be a classic story of a well-managed immigrant success.

The Case for Labour Market Integration

An obvious question comes to mind: Is integration in labour markets through labour mobility necessary at all in the presence of high and increasing trade in goods? After all, economic theory predicts that, under certain conditions, the free movement of goods was a substitute for the free movement of the factors embodied in the production of those goods; hence trade in goods that were highly labour-intensive should do the same for wages as a physical movement of people, accomplishing a result close to factor price equalisation in the end. This is not borne out by reality, in part, because the conditions listed in textbooks are not present in the real world. But once allowance is made for productivity differences, there is stronger evidence of price equalisation, implying that workers are willing to move to places where they can enhance their productivity and incomes (i.e., if wages are location-specific then workers are ready to change their location). Where workers cannot change their location to enhance their productivity, it is possible to conceive of moving the more productive capital to the labour; and this is being practised to some extent through foreign direct investment and outsourcing of business processes. While outsourcing has barely scratched the tip of the surface yet, there are limitations to when capital mobility can be a substitute for labour mobility. For instance, capital may also be more productive in certain locations due to other complementary factors present, such as institutional quality, and moving it may erode some of its productivity. So in the end it may be better to move labour instead. Also, in some cases the productive capital may be immovable (e.g., land) and therefore labour would need to move to perform services in the agricultural sector.

From a macroeconomic point of view, migration could provide a boost or deflate trade volumes. Rising incomes from migration could cause a rise in trade volumes—but the larger the share of skilled workers in migration, the greater the possible decrease in trade (since skilled workers produce tradeable goods); while the larger the share of unskilled workers in migration, the smaller the trade reduction (since unskilled labour is typically engaged in the non-tradeable sector). The wage convergence for unskilled labour due to trade is a negligible fraction of the prevailing wage differentials which are five-fold or more (Freeman and Oostendorp, 2000; dataset by International Labour Organisation). Unpredictable effects on the current account of migrant-sending countries due to the effect on exchange rates may also affect trade either way. So trade and migration should be evaluated on their own merits rather than as a substitute for one another.

Another important difference between trade liberalisation and labour market liberalisation is worth discussing now because it has implications for the proposals set forth in this report later on. Whereas in trade there is a solid argument for multilateral and nondiscriminatory liberalisation policies, the opposite is true for migration where there is little support for such approaches to migration because of the very different implications of nondiscrimination in trade and migration. In trade, multilateral and nondiscriminatory liberalisation maximises economic efficiency by allowing the lowest cost producer to compete, thus forcing high-cost producers to improve efficiency or exit the market. But such adjustments are not possible (and may not be desirable) in labour markets in industrialised countries due to minimum wage laws and social insurance schemes, thus the benefits of multilateral and nondiscriminatory liberalisation are also weaker in the case of labour market liberalisation. An important reason is also that migration has several implications pertaining to social integration and impact on public services. Thus countries will often choose to follow a discriminatory policy on labour inflows—either on the basis of skill or on the basis of country through strict bilateral schemes—in order to achieve the same sort of outcomes.
What would be the welfare impact of greater labour movement?

There is strong evidence now showing that labour market restrictions are imposing a much greater burden on the global economy than the remaining trade restrictions. Through general equilibrium models, it has been estimated that a complete and free movement of labour globally would double global incomes whereas a feasible amount of labour mobility would increase gross wage income worldwide by US$772 billion in 2025. When correcting for price changes faced and caused by these movements, the gains fall to US$356 billion which is a 0.6 percent increase in global income. To put these numbers into perspective, it may help to note that US$356 billion is roughly three times all the official development assistance in 2003 and dwarfs the expected gains from all remaining trade liberalisation. This increase would also translate into a slightly more favourable distribution for developing countries as their share of aggregate gain is 1.8 percent, whereas gain to native high-income countries is 0.4 percent relative to the baseline.

Computable general equilibrium modelling results for modelling labour movements in the Pacific show that an increase in labour from the Pacific islands would raise welfare in the Pacific island countries as well as Australia and New Zealand (Walmsley, et al., 2005). When the model differentiates between skilled and unskilled labour, the gains to the Pacific economies unequivocally come from the movement of unskilled labour. Therefore the movement of unskilled labour warrants further policy attention, recognizing the obvious fact that large or permanent movements of unskilled workers would not be acceptable to the citizens of most destination countries.

What are the channels through which these welfare gains and losses work themselves through the economy? The next section attempts to delineate those channels by presenting a production-function framework to position the analytic arguments and empirical findings of this report.

SECTION 1.4 ANALYTICAL FRAMEWORK, EMPIRICAL FINDINGS, AND POLICY IMPLICATIONS

The framework adopted here follows a traditional ‘production function’ approach where improvements in economic welfare can be thought of as resulting from movements along the production function or by pushing out the production frontier. These movements can occur for any of the following reasons: (i) there has been an increase in the amount of total resources available, (ii) there is an improvement in the way resources are combined or allocated, and (iii) positive externalities exist and can be captured. This framework is used to organise the analytic and empirical findings for both, migrant-sending as well as migrant-receiving countries.

Migrant-Sending Point of View (Pacific)

(i) Increase in amount of resources available

Remittances are monies or goods sent home to family members or communities by migrants who live and work in other countries. The export of labour results in a national loss of the abundant factor but frequently results in an inflow of capital through remittances. In a simple world, if the productivity of labour is low in labour abundant countries, then an injection of capital through remittances should improve the productivity of labour that remains behind by virtue of it being combined with more productive capital. If there is an improvement in labour market conditions due to the departure of some excess labour then that would further increase the benefits to domestic resident labour. And if these additional capital resources respond positively to adverse economic conditions (i.e., are counter cyclical) as they are often presumed to be, then the injection is even more precious because it comes at a time when the country needs it most —unlike private capital which may pull out in adverse times and make bad economic conditions worse. To add to this, there may be multiplier effects if the economy is demand-constrained and remittances could increase the output of many sectors.

The impact of remittances of migrant-sending communities is not trivial and evidence is growing
worldwide that remittances have had a deep and far-reaching positive impact on immediate household members as well as broader communities. In an effort to understand the size and impact of remittances in the Pacific, we commissioned household-level surveys in Fiji and Tonga. Over 900 households answered detailed questions on their household characteristics, migration behaviour, size and frequency of remittances, the household’s spending patterns, and broader socio-economic status. These surveys have been analysed and have pointed to the following main results:

- The amount of resources received in these countries through remittances is significant. In Tonga, over 90 percent of households surveyed received remittances in comparison with 43 percent of households in the Fiji sample. Among remittance receivers, Tongan households receive an average of US$3,067 in comparison with US$1,328 in Fiji.

- The positive impact of remittances on poverty reduction is strong using a variety of measures of deprivation. After taking remittances into account, all measures of relative deprivation improve with different intensities in rural and urban areas. Interestingly, whereas Tonga suffers from more relative deprivation than Fiji before remittances are included, deprivation on the main islands in Tonga taking remittances into account is reduced to such an extent that the situations is better than both rural and urban Fiji.

However, it would be too simplistic to assume that the loss of one resource—labour—is fully compensated for by an increase in another resource—capital. We will return to this important issue at various points in this chapter. From the perspective of assessing the impact of increased resources on the economy, at least three questions come to mind which point to the potentially negative effects of remittances. Each of these is important in the Pacific context.

Do remittances suffer from the problems associated with resource rents? This refers to what economists call the ‘curse of natural resources’ when windfall gains from natural resources like oil or timber have tended to impede governance and modernisation in most countries by taking away the pressures that push for broad-based growth. There are at least two fundamental differences between remittances and resource revenues that should lead to different outcomes. First, natural resource income is of a large magnitude and highly concentrated in the hands of a few, creating a pocket of powerful rent-seekers; whereas remittances are small and widely dispersed in the country (see chapter 3). Second, remittances avoid the government as middleman that resource rents cannot, thus allowing the middleman to follow arbitrary policies that may promote corruption and retard growth.

Are remittance inflows akin to aid inflows which also increase capital resources available to a country? In particular, can remittances cause inflation, overvaluation of the exchange rate and render the tradeable sector uncompetitive? Economists call this the ‘Dutch Disease’ when the effect of large inflows of foreign exchange causes appreciation of the exchange rate making exports uncompetitive in world markets, hence doing a disservice to productive sectors in general. The difference however is that remittances typically are small and grow slowly over time making the effects also small and the time period long enough to allow other sectors to adjust. Where this is not the case—and Fiji (rather than Tonga or Samoa) may fit that description—there is the possibility of adverse impacts of exchange rate appreciations. Overall however, aid and remittances are not to be equated. Whereas aid is an external injection into the economy and raises all sorts of questions about ownership, capacity, and governance, remittances are not really that different from any other export income for its citizens when the export is the service being performed outside of the national borders. In fact, when remittances are treated as income in the calculation of debt/GDP and debt/export income of countries, these ratios drop quite significantly thus raising the credit-worthiness of these countries in international financial markets and further improving access to capital (World Bank, 2006).

Do households that receive remittances work less? The third question relates to the impact of remittances on household labour supply. Economists call this the ‘backward bending supply curve’...
response when increased income does not cause more labour to be forthcoming and individuals choose leisure instead or work.\textsuperscript{11} It is possible that remittance-receiving members of the household may raise their reservation wage and prefer to stay out of the labour market; but the evidence from Guatemala, Jamaica, and the Philippines shows that remittance-receiving households tend to invest more in education (i.e., opt for more schooling instead of working early); and shows reduction in child labour and an increase in self-employment. Similar evidence from the Pacific is discussed in the next section in the context of decisions surrounding the allocation of resources.

Can policy help increase the inflow of remittances? Since remittances are essentially a person-to-person transfer shaped by family ties and shared cultural values, it is hard to think of policy measures that make migrants send more money home. While the flow of remittances will vary with the changing circumstances of individuals and families, a larger migrant stock would in general be correlated with larger remittances. Holding other parameters constant, temporary workers are also likely to remit more to their home countries than permanent workers. This point is taken up later on.

Beyond enhanced labour mobility in general, a reduction in the transaction cost of making financial transfers would ensure that recipients get most of what is sent to them. Evidence points to unduly high transaction costs in the Pacific. For example, remitting NZ$100 (US$68) to Tonga through channels other than the ATM costs 25 to 30 percent of the amount remitted. Using non-bank financial institutions, remitting earnings from Australia to Fiji, Samoa, Tonga, and Vanuatu costs between 10 to 20 percent of the amount remitted (McKenzie, 2006). These transaction costs are much higher than those faced by remitters in other regions of the world. For example, the cost to remit US$200 in the US-Mexico corridor is about 5 percent, and even lower in the US-Philippines corridor at 1-2 percent. (World Bank, 2006). A reduction in the transactions cost of remittance transfer in the Pacific could translate into significant additional amounts of income received, especially for the poor, given the size of remittances flowing into the Pacific. Further, the size of remittances is indeed responsive to the costs; hence a reduction in cost of 1.0 percent is likely to induce more than a 1.0 percent increase in remittances (Gibson, et al., 2006). A lowering of costs in the financial system would also enable senders to use formal channels rather than informal channels, such as mailing or personal deliveries. This would allow better data to be recorded and enable central banks to make necessary changes to monetary policy when needed.\textsuperscript{12}

The Pacific islands could further enhance the benefits of labour mobility by increasing the flexibility of their own labour markets and allowing in skilled labour from neighbouring industrialised countries. While there is bound to be some asymmetry in the numbers flowing in and out, even a small addition to the pool of skilled personnel in the small Pacific islands is likely to have far more benefits than costs. Often prompted on nationalistic grounds, it is not unusual for small countries to construct barriers to entry of foreign skilled labour on the grounds that their entry would hurt domestic labour. However, these concerns appear to be unwarranted. Most islands face difficulty in retaining their skilled labour because it is relatively mobile. Some attempts at quantifying the impact on employment creation from skilled immigration estimate that every skilled migrant into the Pacific may be able to create nearly 10 jobs for local labour (Duncan, 1997). It would therefore be in the Pacific’s economic interest to promote such labour exchanges, especially in the context of bilateral agreements, rather than restrict the entry of skilled workers willing to enter with their capital, know-how and employment-enhancing potential.

Similarly, some voluntary return migration of skilled workers may also be encouraged by removing penalties on seniority in government positions, and pursuing discussions with the major destination countries for Pacific migrants on dual citizenship agreements, as well as fiscal incentives such as portable pension schemes. (Follow-up work is underway in the World Bank on portable pensions for the Pacific.)
(ii) Improvement in allocation of resources

In addition to the static effects stemming from the increased remittance resources, migration may be able to influence the way resources are allocated, both at the aggregate level as well as at the household level. At the aggregate level, remittances can alter the allocation of resources among groups of households by changing the underlying distribution of income. At the micro level of the household, the prospect of migration and the subsequent receipt of remittances can have profound effects on the allocation of income towards consumption or investment. We take up these effects in turn.

In countries where the poor have migration options, remittances tend to benefit the poorest and hence result in reducing income inequalities. When the relatively well-off migrate or when migration is skewed towards the highly skilled, income inequality may worsen. As income distribution changes, so does access to assets—such as capital equipment or land; and the final outcome of how labour, land, and capital are combined in productive activities. But it has not been possible yet to map out empirically these effects. In fact, even measuring income inequality itself poses some methodological challenges. Measures, such as the Gini coefficient, may remain unchanged despite the fact that the shape of the underlying distribution curve changes. Further, such measures cannot take into account the fact that different cohorts of people may go in and out of certain income quintiles making it necessary to use panel data, which is very hard to come by. Through household survey data collected in the Pacific, we are able to show that remittances and other unrequited internal transfers have a strong positive impact on income distribution. In Tonga, the poorest 40 percent of the population’s share of cash income increases from 7.3 to 18.7 percent, and the share of the richest 20 percent falls from almost 63 to less than 50 percent. In Fiji, the impact is also positive but weaker than in Tonga (as one would expect given fewer remittance-receiving households) where the share of the poorest 40 percent increases from 9 to 11.6 percent, and the share of the richest 20 percent of the population falls from 57.8 to 53.8 percent.

At the individual or household level, several studies have looked for a direct link between remittances and the consumption-investment mix of household expenditures, and journalistic references to the issue have often criticised the preponderance of remittance-funded consumption. There are important reasons to question the validity of these views.

From a welfare perspective, an extra dollar of investment is only better than an extra dollar of present consumption if the marginal social value of investment is greater than its marginal private value. At low levels of income— or when there is great volatility of income—access to a steady and reliable source of income for poor vulnerable households serves an important social protection role. Very few policies and instruments are available that can claim to cushion the poorest in direct and effective ways like remittances have shown to be able to do. Also, if the life-cycle model of remittances captures the motivation behind remittances, then it is useful to bear in mind that they are sent first to parents, then siblings, and only later dedicated to building a ‘nest egg.’ Brown and Walker (1994) in their survey of Tongan and Samoan migrants fully support this pattern. Remittances sent to parents are a form of pension payment, and therefore one should expect these funds to be spent on consumption rather than investment (the investment has already occurred). Remittances sent to siblings tend to be devoted to meeting their educational needs, which should not be viewed the same as consumption.

Positive externalities can exist in investment expenditure, and it is for this reason that it is considered desirable to see remittances funding investment. But efforts to identify the causal effect of remittances on investment often run into various problems. First, investment is correlated with the opportunities that exist, that is only countries with good investment climates should expect to see remittances fund investment. Second, when more enterprising households are the ones sending migrants, high investment may be wrongly associated with remittances due to self-selection. Third, income is fungible, and it is difficult to isolate the effect of remittances from those of other sources of income. Simply asking how remittances are spent is unlikely to reveal the marginal effect of remittances on
spending because remittances, even when spent on investment, are likely to free up the marginal dollars for consumption. This is why there is often a difference between anecdotal and survey data that show the average percentage of spending on consumption and econometric data that calculates the marginal propensities by modelling remittances as an exogenous positive shock to household income.

In the household surveys conducted in Fiji and Tonga, questions on savings were posed directly rather than attempting to deduce it from consumption expenditures. In Fiji, 79 percent of those who had received remittances had saved in comparison with 62 percent of those who had not. In Tonga where over 90 percent of households had received remittances, there is still a difference, albeit not as great, with 59 percent of those who received remittances having saved in comparison to 52 percent in the case of those who had not received remittances. A relatively higher proportion of Indigenous-Fijians in the lowest two quintiles had saved, and the mean levels of saving in these two groups were significantly higher than the levels for Indo-Fijians in the same income quintiles. This is consistent with the earlier observation that the Indigenous-Fijian households in the lower two quintiles received a much higher level of remittances than their Indo-Fijian counterparts. It would therefore seem that being in receipt of remittances at lower ends of the per capita income spectrum can make a significant difference to saving. The econometric analysis considered both the impact of remittances on saving and the influence of saving by the household on the levels of remittances it received. It was found that in both samples remittances had a strong impact on saving, especially among the Fiji sample where the estimated marginal propensity to save from remittances was 73.4 percent. When the effect of remittances on saving was estimated for the two ethnic groups in Fiji, it was found that the strong remittances effect on saving is associated with Indigenous-Fijian households. The analysis also found that in Indigenous-Fijian households this relationship runs in both directions, indicating that migrants have a higher propensity to remit when the household saves more.13

In Tonga, evidence is also found that migration and remittances tend to increase income from non-wage sources, such as business or farm income. This means that households with migrants are able to direct resources towards business activity. Tongan migrant households very often have their members spread across a number of activities and can act as a stimulus and conduit for business activity acting as 'transnational corporations of kin'. The Fijian results do not tell a similar story perhaps because the remittances are still a relatively early phenomenon and are smaller, and Fijians are engaged in different occupations from their Tongan counterparts.

Savings and investment may also take different forms. Income spent on building human capital should be viewed as investment rather than consumption. It is interesting to observe the decision of remittance-receiving households in determining investments in human capital through expenditures on education. In theory, there should be a positive impact on the demand for education for two reasons: first, the credit constraint on schooling of dependants of migrants is reduced when remittances become available; and second, the mere possibility of migration increases the incentives for investing in schooling by raising the return on education.

The results from the Pacific give empirical support to the above hypothesis. Primary and secondary education to age 14 in Tonga is compulsory and free. It is possibly for this reason that there was little variability in educational attainment, and the econometric analysis indicated that migration and remittance effects were not evident. In Fiji, 8 years of education is supplied by the government, but it is not compulsory. This probably explains why there is considerably more variation in the education attainment in the Fiji sample.14 The analysis showed that remittances are associated with better educational attainment at the secondary level (by alleviating the budget constraint). In the second part of the econometric analysis, the impact of household migration on post-secondary education for both Fiji and Tonga was assessed. It was found that having a migrant (rather than remittances) in the household increased the likelihood of other household members acquiring post-secondary education (by inducing investment in education). The relationship is stronger in Fiji where the remaining family members have an incentive to undertake further investments in education due to the size of the
domestic economy and also have access to domestic education institutions in Fiji, which is less likely to be the case in Tonga. These findings are relevant from a policy perspective for they indicate that any potential negative brain-drain effects of migration could, to some extent, be countered by larger investments in education by remittance-receiving households.

In order for income distribution to become more equitable due to remittances, migration options must be extended to the poor and unskilled rather than be reserved for the highly skilled or well-off. Many of the poor lack the financial resources or social networks to migrate, so programs that explicitly target those at lower quintiles of the income distribution would yield the greatest benefits. Given social and political concerns regarding such migration, it will be important to balance these benefits with recipient country concerns; and this balance might be best achieved through managed migration programs designed for those who are relatively less endowed with wealth or skills. Existing literature also suggests that temporary workers remit more than permanent workers, and poor migrants who are not likely to travel with their families are likely to remit the most and help achieve greater social equality.

It is not clear whether policy can influence the decision to invest or consume at the household level. More importantly, it is not even clear whether that is a desirable goal at all since remittances, by funding consumption, are providing an important social protection role for the poorest and most vulnerable sections of society. Remittances should be thought of as any other income; most households will expect to fund mostly consumption expenditures at fairly low levels of income. As income rises and savings and investment opportunities grow, the ability and attractiveness of saving will also grow. It may then be desirable to provide information to remittance senders and receivers on various financial instruments that are available to save and invest in. Such non-interventionist policies that remove information market asymmetries in the system are likely to be helpful in the long run in introducing households to the idea of saving. Any improvements in the business environment in the Pacific are likely to further enhance the positive impacts of remittances; so this should serve as a reminder that remittances are not a substitute to carrying out structural reforms but rather expected to be boosted by complementary reforms.

There are proposals in some writings for matching grant schemes where public funds match remittance funds or exceed them by a factor of two or three (Johnson and Sedaca, 2004). Such schemes are in practice in some communities in Asia and Latin America; the schemes are said to be channelling remittances into investment-like activities and should be commended for delivering important services to the community. But from a public policy perspective it is not clear whether public resources are being diverted away from better uses and also what the rationale is for subsidizing remittances when other forms of financial inflows are not subsidised by governments.

(iii) Capturing the positive externality from migration

The economic literature has identified and recent experience has borne out that there are strong positive externalities that arise from the migration of people. The influence of the Diaspora in promoting technology transfers and knowledge networks acquired abroad by serving as 'reputational intermediaries' have come to challenge the traditional brain-drain arguments put forth against migration from developing countries. Anecdotal and empirical evidence of this type is increasing for India, South Korea, and Taiwan (China), but externalities of this type may still be premature for the Pacific island countries. This is because the volume and concentration of highly-skilled labour as a percentage of the island countries' total populations is still relatively small. Also, in the absence of strong economic growth in the Pacific island countries, the demand for return migration or links with migrants overseas has not yet emerged strongly.
However, once workers have been exposed to efficient governments and private sectors abroad, they can be expected to demand an improved incentive environment that would enforce greater discipline and efficiency on the allocation of internal resources from their governments and private sectors at home. A transient population of workers rotating between remote developing regions and industrialised metropolises is more likely to induce demand for better governance within the islands while cementing closer regional ties. This kind of ‘social remittances’ can be a powerful vector of norm diffusion with long-term economic consequences (Kapur and McHale, 2005).\textsuperscript{16}

But again, it is important to remind ourselves that these positive externalities may come at a cost. We are talking about people who are moving abroad; people who are absent from participating in national debates at home; people who are unable to write editorials in their national newspapers or speak on local radio stations when governments are due criticism; people who are not available to teach and mentor the next generation, and sometime not available to parent their own children. The costs on society of these absences are impossible to estimate in any economic model but are surely deeply felt. And these costs may change depending on who migrates. If migration is skewed towards the skilled, it is likely that the costs to society are greater than if the unskilled migrate. Estimates from the computable general equilibrium model—that experiments with a 1.0 percent positive shock to the (skilled and unskilled) labour flow from the Pacific islands, Australia, and New Zealand—show that welfare in the Pacific islands could fall due to the loss of skilled labour force and the consequent rise in real skilled wages, which is not compensated for by the increased remittances sent back home.\textsuperscript{17}

These monetary losses would probably increase by multiples if the long-term social and institutional costs of losing skilled labour alone could be included. Workers who have invested in human capital are more likely to affect both the supply and demand for institutions. While the effect on supply of institution builders is obvious, the effect on demand is more subtle because this labour force represents the people who have the strongest interest in seeing better institutions develop since they are making the choice to leave or stay.

At a time when institutional quality is central to discussions on promoting growth and development in the Pacific, it is important to understand the impact that internationally mobile human capital has on building effective domestic institutions. Although institutions have been considered the essential element of development, our understanding of how successful institutions actually develop is still nascent. But one could state with reasonable certainty that successful institutions depend to a large extent on having a critical mass of people with high levels of human capital, and this is even more likely to be the case in the initial stages of a country’s economic development (Kapur and McHale, 2005).

Faini (2002) shows that migration, via remittances, contributes to growth in the migrant-sending country but is a declining function of the skilled composition of the migrant labour force. This indicates that the negative impact from brain drain may not be compensated by a larger flow of remittances, hence recommending host countries to limit their bias in immigration policies towards skilled labour. Anecdotal evidence from the Pacific seems to suggest that the loss of the very limited skilled workers poses quite a significant problem to the island countries. In that context the Australian policy to help establish training colleges to augment the supply of skills should be applauded and welcomed in the Region as it would help compensate Pacific governments for the training of emigrants and also improve the qualification of workers.

From a policy perspective, if social remittances are to serve an important role in transforming societies then non-elites must have the greatest access to these social remittances. A mobile pool of workers who are exposed to industrial world institutions and are able to bring back home new ideas and practices can be a powerful agent of change. Hence, migration schemes that maintain a steady flow of non-elite workers are likely to help most usefully to this achievement.
In order to give institutions a fair chance of developing in the small islands, some balance in the immigration policies of industrialised nations would also be beneficial. While more balanced immigration would be fairer and better, even selected liberalisation of barriers is better than no liberalisation at all. Very small countries with populations of less than a couple million may simply lack the capabilities necessary to be able to retain talent in many sectors. Just as small towns in rich countries find it extremely difficult to prevent bright young people from leaving, so do small states (Pritchett, 2003). The public policy priorities for them are best directed to facilitate the movement of talent from these small countries to proximate larger countries and regional integration of labour markets that can help build a critical mass of human capital. At the other end of the spectrum are the large countries which can not only cope with the loss but also benefit from the resulting networks. Of course, if foreign-skilled labour wishes to work in these small states, their entry should be encouraged rather than restricted.

But rather than remove emigration options for those lucky enough to have them, it would be better to explore ways for more people to share those gains where available.

**Migrant-Receiving Point of View**

(i) Increase in amount of resources available

Migrant-receiving industrialised country markets are expected to gain from inward labour mobility because their current endowments favour capital rather than labour. Influx of the scarce factor—labour—would increase the productivity and hence returns to capital. Through general equilibrium modelling, it is estimated that industrialised countries would gain US$139 billion in real income. The computable general equilibrium modelling for Australia and New Zealand shows that an increased inflow of workers from the Pacific would increase welfare of residents in these countries by US$302.61 million and US$26.5 million, respectively by raising output in all sectors. Most of these gains would come not from the movement of skilled labour, but rather from increases in the supply of unskilled labour. In fact, it is possible that the economic benefits of migration for industrialised countries could be even greater than those predicted by the models due to factors that have not been quantified, such as increased productivity of migrants and their future offspring; increased investment levels in response to higher returns to capital, and possibly higher labour force participation rates among citizens of industrialised countries as support services become available.

Low and further declining fertility rates in many industrialised countries are causing higher age dependency ratios and have given rise to concerns regarding worker deficits to deliver services to a growing stock of dependants (young and old). In Australia and New Zealand, it is estimated that the proportion of population over the age of 65 is expected to more than double between the years 2004-51 (Box 1.1). The demographic projections suggest that the next 40 years will see substantial labour shortages in advanced economies (McDonald and Kippen, 2000), increasing the pressure for skilled labour as well as unskilled or semi-skilled labour in sectors not filled by domestic workers.

A variety of proposals such as increasing the retirement age and inducing more women into the workplace are being considered in industrialised countries. Migration is an option that would allow countries to import taxpayers as well as young workers in the face of labour shortages and ageing populations. But the levels of immigration required to make a dent into these problems may not be considered feasible in most countries, and hence a variety of policy options will need to be considered properly to understand and prepare adequately for the future.
Box 1.1: Population Projections for Australia and New Zealand, 2004-2051

According to the Australian Bureau of Statistics (2006), the estimated resident population at June 2004 is projected to rise to between 25 and 33 million in 2051, with the median age reaching 46 years. By 2051, the proportion of Australia’s population aged 65 years and over is projected to average 32 percent, more than double the 2004 proportion. If future net migration falls to zero and the below replacement fertility level lowers, the current beehive-shaped age structure of the population could take on a coffin shape, indicating a sizeable reduction of the labour force (McDonald and Kippen, 1999).

From Pyramid to Beehive to... Coffin?


As Australia’s population ages, future labour supply is projected to be sluggish, through a decline in aggregate labour force participation rates (by about 7 percentage points) and reduced average hours worked. Rapidly rising expenditure on health care and pensions is projected to lead to a gradual build-up of a fiscal gap of around 6.4 percent of GDP by 2044-45 (Productivity Commission, 2005).

A similar story is presented for New Zealand. According to Statistics New Zealand (series 5), its national population at June 2004 is projected to reach 5.05 million by 2051, with half of the population 46 years and older. By 2051, one in four New Zealanders is projected to be aged 65 years and over, a doubling of the ratio in 2004 – and for each 65+ person, there will be 2.2 people in the working-age group, compared with 3.5 people in 2004.

Source: Statistics New Zealand, 2006

Studies suggest that the ageing population could raise government expenditure (excluding financing costs) by about 7 percentage points of GDP by 2050, particularly in health and superannuation, and reduce living standards (measured as real consumption per person) though not to below current levels (Davis and Fabling, 2002; Bryant, et al., 2004; Guest, et al. 2003).
While Migration Increases the Supply of Labour, Could it Drain Fiscal Resources?

The fiscal implications of immigration are not well understood and remain difficult to quantify. While there have been attempts to estimate this for various countries, there remain challenges to calculating properly the fiscal impact of immigration because it depends heavily on several factors:

- the methodology used that dictates whether the unit of analysis is the individual or the household;
- expenditures and revenues that are included;
- public services that are regarded as pure public goods;
- extent of economies of scale in expenditures;
- age structure of the immigrant populations and their level of skills, education, and fertility.

For small numbers of migrants, especially a rotating pool of migrants, it does not seem likely that the burden on resources would overshadow the large economic benefits that are estimated through the computable general equilibrium model. In Chapter 4 some features of migration schemes are shown that keep the fiscal costs manageable.

Given that labour shortages exist in most industrialised nations and in Australia and New Zealand, is the Pacific Region the best place to look for importing labour?

After all there are other labour abundant economies with a large supply of valuable skills and history of immigration benefits; China and India are obvious examples. As shortages of skilled labour intensify, international markets for skilled labour will also function with more speed and efficiency; and it will be unavoidable and indeed necessary to recruit workers from a global pool of talent that competes fiercely. The comparative advantage of the Pacific is not in competing with the large countries for skilled entry into Australia and New Zealand, although many skilled Pacific islanders do enter on that basis. What the Pacific needs is access to regional labour markets for its labour that is unlikely to find formal employment opportunities at home. Much of this labour is engaged in the informal sector or underemployed and hence is migrating to the capital cities in the Pacific in search of formal employment and social services, but not finding it. Whereas the development impact of sending small numbers of workers abroad is likely to be minimal in the larger countries of Asia, a similar movement from within the Region would have a significant impact on improving Pacific livelihoods over some length of time and also enhance regional integration and stability. These points are further developed in the remainder of this paper.

(ii) Improvement in allocation of resources

Enhanced labour mobility can lead to an improvement in the allocation of resources by allowing a better skills/job fit in the host country’s labour market. Having engineers drive taxi cabs or medical students on holiday sign up for performing farm labour reduces the overall allocative efficiency in the economy. Hence the aim of public policy should be to facilitate a more efficient allocation of human resources through flexible labour markets.

While shortages are expected in several occupations, skilled migration schemes are already in place and will probably be further liberalised. Markets for skills are working well and likely to get even more efficient. It is the movement of unskilled labour that is most constrained and likely to remain so at the global level. However at the regional or bilateral level, there is considerable scope for some mutually beneficial exchanges of labour. Recipient countries would benefit because higher participation in schooling in rural areas coupled with high wages in retail and services have attracted away young workers from activities, such as agricultural work, creating shortages. Trying to make
agricultural work more attractive for those with other employment options may not be the most
efficient or desirable policy option given the opportunity cost of these workers. Since a ready supply
of unskilled labour exists at the doorstep in the Region, a combination of skilled and unskilled access
to Australia and New Zealand markets would instill greater balance into the immigration policies of
the recipient countries, which would translate into greater distribution of benefits to the Pacific
populations.

Numerous possibilities exist for fine-tuning migration policies to improve the fit with labour market
needs through bilateral agreements. The next section discusses this to some extent and Chapter 4
details the various arrangements that could be put into place to customise seasonal labour schemes.

(iii) Capturing the externality from migration

While immigration may deliver tangible economic benefits to destination countries and make their
populations better off for the most part, there is usually overt or inherent resistance to the idea of
increased immigration in industrialised countries, especially of unskilled labour. The concerns can be
expressed in several ways:

- On monetary grounds, such as the possibility of migrants presenting a fiscal drain on the system or
taking jobs away from the domestic unskilled population;
- On social grounds regarding the difficulties of integration into destination country societies, the
potential for overstaying and creating an illegal migrant underclass;
- On perceived compromise to national security in an increasingly security-conscious global
environment.

Such concerns are widespread and understandable, and hence would need to be addressed adequately.
For destination countries in this Region, the likelihood that Pacific unskilled labour would displace
local labour does not seem to be an immediate worry given that most of the agricultural towns in these
countries claim to be suffering from the absence of a reliable supply of labour suited to agricultural
work. For example, the New Zealand government has recently declared certain agricultural regions as
being severely impacted by shortages and unlikely to meet its labour needs through domestic workers
alone. Efforts to bring the unemployed into the workforce in destination countries have had only
partial success and should continue to be pursued, but cannot be relied upon to address the long-
standing labour shortages.

Concerns regarding illegal overstay, social integration, and access to services will need to be
addressed; and the appropriate mechanism is through the careful design of a temporary movement of
persons (TMP) scheme. However, not all TMP schemes worldwide have been considered successful;
and indeed some have left lasting memories of exploitative relationships or policing of workers to
enforce compliance with immigration rules, leaving destination countries wary of considering such
programs again, especially for unskilled workers. But given how large the potential benefits could be
from the movement of labour in the Region, it would be a lost opportunity to let previously ill-
designed schemes hold back constructive dialogue on this issue today. In fact, past experiences have
much to offer by way of lessons that could usefully influence the design of new programs in the
current economic context.

A careful review of global experiences reveals that success or failure can be predicted with reasonable
accuracy based on the particular features of the bilateral agreements in place. In particular, the
design of the Canada-Caribbean agricultural worker scheme offers much guidance to policymakers in
the Region today and has less to do with ‘cultural values’ than with economic incentives that are built
into the scheme that predispose employers and workers to follow the rules. For instance, Canada
allows a revolving door of migrants to perform agricultural work, which suits employers and workers
alike in that good workers are rewarded with re-entry in the next year. Whereas similar schemes in the United Kingdom make entry a one-off option, increasing the probability that a worker will jump their visa conditions and overstay or go AWOL. Again, recruiting university students from other countries to perform agricultural work, along with imposing all the upfront costs of travel and insurance on the worker, is almost a sure way to encourage overstays since the migrant will try to amortise the costs over a longer period; and being overqualified for the job predisposes them to using the farm jobs as a stepping stone.

To showcase some of these design features and draw attention to the attributes that could go a long way in shaping the workings of a TMP scheme into the industrialised countries of the Region, we have undertaken a case study of a small region in Australia that is suffering from labour shortages. The case study gathers information through surveys and interviews on the metrics of a viable TMP scheme for the Pacific. This case study highlights the many important details of the program that would demand careful attention of policymakers and offers preliminary advice on how a small pilot scheme, based on bilateral negotiations, could be tailored to best suit the needs of the Pacific islands as well as the destination countries.

Bilateral agreements can also stipulate that the numbers of workers sought each year be determined on a market-driven flexible basis, dictated by the prevailing labour market conditions in destination towns rather than by arbitrary quotas that become quickly out-dated as labour market conditions change in destination countries. Some of these features also offer instructive guidance for similar schemes into New Zealand—although some parts of the analysis would need to be customised to fit domestic rules and regulations. Some preliminary analysis is underway, and the features of such schemes are being carefully considered for proposed pilots in selected agricultural towns in New Zealand. In fact, the features highlighted as being essential to a successful TMP scheme have universal applicability. Indeed all countries facing labour shortages for unskilled labour and with an economic interest in the Pacific Region are encouraged to consider fine-tuning the generic features of the proposed model to suit their current and/or future labour needs.\(^{19}\)

Concerns about immigration compromising security are also widely held in a post-9/11 world and will need due attention in putting in place well-managed recruitment procedures. Given how small the initial numbers per country can be, there is plenty of room for adjusting recruitment procedures to reach maximum efficiency.

And security concerns can work both ways. If ‘failed states’ themselves present a security concern for surrounding industrialised nations, then any policy that reduces the fragility of these small states—and indeed of the most vulnerable sections of these fragile states—should be seriously considered. In a recent paper, Urdal (2004) shows that in the presence of a preponderance of a young population and low domestic employment prospects in a country, the probability of social conflict rises unless there is a safety valve of migration. In the Pacific, fertility rates are high and appear to be coming down only slowly contributing to the projected population growth of as much as 2.5 percent per annum. Even under assumptions of faster declines, significant population growth rates will continue for many years because of the population momentum that has been built up. Melanesia in particular, which is characterised by high fertility rates, low formal sector employment, and very limited migration options, will generate the highest proportion of excess labour. For example, in Solomon Islands and Vanuatu where formal sector employment is already among the lowest in the Region, the working-age populations are expected to increase by another 30 percent within the next decade. While some domestic employment opportunities will also be created, it would still leave nearly 90 percent of the populations of these countries outside the formal sector. Estimates presented in this report indicate that over 370,000 people in Fiji, 279,000 in the Solomon Islands, and 129,000 in Vanuatu would not be able to find formal sector employment in their countries by 2015.

\(^{19}\)
These estimates present a sense of urgency about the reform agenda in the Pacific which should focus on improving the environment for domestic business formation, facilitating the formation of high-quality institutions, and pursuing stronger regional integration. While no single policy instrument can hope to ensure economic and social stability, a comprehensive package that promotes regional integration in products, as well as factors of production, would have the best chance of succeeding in the small Pacific island nations.

SECTION 1.5 SUMMARY AND CONCLUSION

Figure 1.3 summarises the main thrust of the arguments in this report and within this context makes a brief mention of some of the follow-up work, which is underway.

In ranking migration policies on the basis of their ability to support economic development and social stability, a scenario of only skilled workers migrating permanently with zero mobility for unskilled is probably least development-friendly (no migration at all for skilled could probably be worse); while a scenario of both skilled and unskilled moving in a circular fashion, generating financial flows as well as serving as conduits of social change, is likely to be most development-friendly for the Pacific. In between this worst and best-case scenario are approaches that provide compensation to sending countries by augmenting supply, which is very welcome in small states, as well as ensuring that financial links are strong. Efforts to encourage two-way flows of skilled workers would further bestow some pro-development outcomes but cannot be forced since there are good reasons for host countries and skilled migrants themselves to favour some permanent migration. This representation is intended to be interpreted in a heuristic manner rather than attempting to quantify costs and benefits linearly along the spectrum.

As a final comment, it is worth noting the regional experience of expecting strong development outcomes by focusing on the high-value sectors, such as fisheries or timber, has led to disappointment. This is because such sectors are characterised by high rent-seeking behaviour resulting in large incomes being concentrated in the hands of a few citizens. Instead, what Pacific islanders need right away—in the face of increased challenges of demography, as well as rapid globalisation of production and trade—is to explore as many different avenues as possible to allow them access to productive employment and the opportunity to create an economically safe future for themselves and future generations. While labour mobility alone will not transform the economic fortunes of Pacific islanders, it can make a significant contribution to the economic development and social stability in the region.

As labour mobility is being transformed from being purely an issue of domestic immigration policy into a complex development issue, this report hopes to make a timely contribution to the development dialogue in the Pacific Region.
### Figure 1.4: The Migration and Development Nexus

<table>
<thead>
<tr>
<th>LEAST development &amp; stability friendly model of migration for the Pacific</th>
<th>MOST development &amp; stability friendly model of migration for the Pacific</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Permanent skilled only</strong></td>
<td><strong>Permanent + temporary skilled and temporary unskilled</strong></td>
</tr>
<tr>
<td>Augment supply through training: technical colleges and scholarships supported by donor-funded initiatives have been announced</td>
<td>Promote circular movement of skilled and unskilled workers – policy reforms in destination countries, capacity building in sending countries</td>
</tr>
<tr>
<td>Permanent skilled with options to mitigate costs</td>
<td>Permanent + temporary skilled</td>
</tr>
<tr>
<td>HR policies to not penalise return migrants</td>
<td>HR policies to not penalise return migrants</td>
</tr>
<tr>
<td>Dual citizenship</td>
<td>Dual citizenship</td>
</tr>
<tr>
<td>Portable pensions</td>
<td>Portable pensions</td>
</tr>
<tr>
<td>Follow-up work: study on design of portable pension schemes for the Pacific is underway</td>
<td>Follow-up work: study on design of portable pension schemes for the Pacific is underway</td>
</tr>
<tr>
<td>Promote greater financial links through remittances</td>
<td></td>
</tr>
<tr>
<td>Follow-up work: analysis to lower transactions cost of remittances is underway with partner governments</td>
<td></td>
</tr>
</tbody>
</table>


References


Notes

1. Restrictions on illegal migration are a separate issue. The focus of this chapter is on legal migration.

2. Pacific Island countries (population and GDP per capita in 2004) that are members of the World Bank Group are Fiji (840,800 and US$3,098), Kiribati (97,800 and US$633), Marshall Islands, Republic of (61,200 and US$1,803), Micronesia, Federated States of (109,700 and US$1,786), Palau (20,000 and US$6,350), Samoa (183,700 and US$2,030), Solomon Islands (465,800 and US$513), Tonga (102,000 and US$2,087), and Vanuatu (207,300 and US$1,472).

3. These countries are not the micro-states that characterise the Pacific or even small states more generally.

4. Both indices range from 0 to 50, and a total score of 100 would indicate maximum vulnerability to the elements. Positive (‘floods’) and negative (‘droughts’) rain shocks were generated by regressing yearly rainfall data against a time trend. (That is, climate change is assumed rather than constant mean temperatures.) The residuals from these regressions where then used to measure shock years which were arbitrarily defined as years in which rainfall was one standard deviation above the trend (predicted) value (to give ‘floods’) or one standard deviation below (to give ‘droughts’).

5. The pattern for the Solomon Islands, however, is not as strong, though it is interesting to note positive growth in food production for the 1990s, a period which was relatively free of natural shocks, but negative growth in GDP, which is most likely explained by political instability and export price shocks.
6. The impact of shocks on economic volatility is dependent on a number of attributes such as size of the agricultural sector, resilience of infrastructure to physical shocks as well as the financial structures. Financial institutions have significant impacts on how organisations cope with shocks through the process of credit rationing but the link between external shocks experienced and the development of the financial sector can be endogenous as frequent large shocks can inhibit the development of financial depth and risk prone financial institutions may send signals to overseas investors.

7. The assumption is that the overall stock of workers in high-income countries would go up by 3 percent, implying mobility of 14.2 million workers from developing to high-income countries by 2025 (World Bank, 2006).

8. Causality with adversity at the household level is hard to establish from data usually because of the likelihood of reverse causality where remittance receiving households can mitigate adversity better (better nutrition, frequent health checks). A follow-up study using macroeconomic data to assess the cyclicality of remittance flows is underway.

9. The emigration and remittance experience of the North Pacific countries (FSM, RMI, and Palau) is quite different from that of the South Pacific. Citizens of these North Pacific countries can move freely to the United States and those who are successful in finding employment there are able to move immediate and extended family members without any restrictions. In addition, these countries receive fairly large compensation from the United States in exchange for access to these atolls for defense-related uses. For example, the Kwajalein landowners in the RMI get over $14 million in annual payments each year in exchange for the right to use the atoll. Many of those recipients maintain their residences in the RMI but tend to live in their US homes. At a macro level, these outflows may be dwarfing any incoming remittances.

10. Previously collected and analysed data from Samoa is also available and referred to where relevant.

11. Or where the income effect is smaller than the substitution effect.

12. World Bank study (forthcoming) will identify measures to reduce the barriers to competition in certain corridors.

13. The decision to save remittance income may also be influenced by the temporariness of the positive income shock (temporary income tends to be saved more); a change in mental accounting on the part of the household; or the migrant’s explicit preferences on how remitted income ought to be spent.

14. Similar inquiry into a sample of Sri-Lankan households found some evidence of a shift from public to private education with the receipt of remittances.

15. Depending on the temporal properties of income, the mental accounting of how this income is spent could vary.

16. Experience in Egypt of the Moroccan migrants who took on Egyptian fertility rates went against the predictions in the 1970s of demographers who were estimating a sharp decline in fertility in Egypt and only a gradual one in Morocco. Two decades later the opposite had occurred despite higher rates of economic growth and levels of education in Egypt, signaling a transfer of ‘values’ particularly to the second generation of Moroccan-origin emigrants in Europe. Mexican data also showed how emigration can expose non-elite family members to the preferences of foreign country. A panel study of political attitudes in a cross-section of Mexico’s population prior to the
country's elections in 2000 questioned some 2,400 respondents about their party affiliation, their views on various political issues, and details about their families. This study revealed that those with relatives in the United States were more 'neoliberal' that those without similar connections.

17. These results are at odds with global evidence where even the movement of skilled labour increases welfare, although emigration of unskilled labour increases welfare by much more for the sending country. The difference may be emerging from the fact that in the global exercises, much of the labour movement is emerging from large developing countries who may either have an over-supply of skilled workers to start with, or can quickly make up the loss and hence attenuate the rise in wages of skilled labour.

18. Most liberal schemes are between countries that enjoy geographic proximity and similar levels of development. Less liberal are those that are among countries that are geographically close but differ substantially in their incomes.

19. Malaysia and South Korea have indicated their interest in receiving labour from Timor-Leste to work in the construction and agriculture sectors. In particular, the Korean Government has agreed to accept 200 Timorese workers to work in the construction sector (with the request that the workers learn the Korean language). The European Commission’s ‘Strategy for a Strengthened Partnership with the Pacific Community, 2006’ also notes the importance of access to industrialised country labour markets for Pacific islanders.
CHAPTER 2. THE YOUNG AND THE RESTLESS: THE CHALLENGE OF POPULATION GROWTH

Population growth rates remain high in the Pacific except in those countries with high rates of emigration. As a result, young people make up a large proportion of the populations. This so-called 'youth bulge' is of concern because these countries are generating relatively few employment opportunities. Therefore, there are increasing numbers of long-term, unemployed, under-employed, and illegally employed youth. Because of the lack of investment and job creation, the countries are foregoing the economic advantages that they would otherwise be able to reap through the employment of these potential workers. On the contrary, the large numbers of under-employed youth have been linked to increasing social problems and also provide one of the ingredients for civil unrest. Hence, they become one of the factors behind the low levels of investment and job creation.

SECTION 2.1 INTRODUCTION

This chapter is largely concerned with two issues. First, population projections have been made for nearly all the Pacific island countries under different fertility and net migration assumptions. These two variables are the focus of attention in the projections as they can be the most dynamic parameters underlying population growth. Fertility rates are declining around the world; therefore, it is useful to examine the consequences of declining fertility rates in the Pacific. Emigration has had very significant impacts on population growth in some countries, such as Samoa and Tonga. For various reasons, emigration possibilities may increase for other countries in the Pacific; therefore, it is of interest to examine the likely impacts of increased emigration.

The second issue examined is the likely growth in numbers of people of working age not employed in the formal sector. These people are in the informal sector or the subsistence sector but can be considered as potential employees for the formal sector or as potential emigrants to work overseas and send back remittances. With the current focus on emigration and remittances in the Pacific, an objective of this paper is to provide estimates of the excess demand for formal domestic employment and potential demand for overseas employment in the various countries. This issue is studied by making projections of formal sector employment growth in the Pacific island countries and, together with the population projections, seeing what impact they are likely to have on the numbers of people in the informal and subsistence sectors.

SECTION 2.2 POPULATION PROJECTIONS

Population projections have been made for Papua New Guinea, 13 Pacific island economies (Annex A), and Timor Leste (Annex B) for the period 2004 to 2029. The projections were generated for all countries under two assumptions for fertility and net migration and a single mortality assumption. However, for Cook Islands, Samoa, and Tonga an additional net migration assumption was simulated. The 'base case' projection scenario has the fertility rate continuing to steadily decline in line with recent trends and net migration continuing at recent levels (using best guesstimates of these levels). A more rapid rate of decline in the total fertility rate based on experience in other countries was also simulated. With the recent interest in emigration from the Pacific, the alternative migration assumption was for net migration to increase by 10 percent in each 5-year projection period.
Data were obtained from a variety of sources. The main sources for fertility and mortality trends were Booth (1992, 1993) and South Pacific Commission (1998). National census reports were also consulted where necessary. Other sources, such as the international web-based data of the United States Census Bureau, World Health Organisation, International Labour Organisation, and United Nations Population Division were consulted, but in many cases were found to be contradictory and unreliable. Data on migration were obtained from national census reports and from the Secretariat of the Pacific Community (2001). The 2004 base populations were from the Secretariat of the Pacific Community.

Mortality

The level of mortality was specified in terms of life expectancy at birth for each sex and for each period. Assumptions were extrapolations of past trends; the assumed values of life expectancy are shown in Table 2.1. In the absence of good quality age-specific data, model life tables were used to represent the age pattern of mortality. The West family of model life tables (Coale, Demeny, and Vaughan, 1983; Coale and Guo 1989) was chosen. This pattern is commonly used in the Pacific and is the basis of most available life tables. For each value of life expectancy, the appropriate life table was derived by interpolation between relevant model life tables. Survivorship ratios by age were calculated from each life table and used to 'survive' the population over the 5-year period.

<table>
<thead>
<tr>
<th>Table 2.1: Assumed Life Expectancies by Sex and Period</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Males</strong></td>
</tr>
<tr>
<td><strong>Females</strong></td>
</tr>
<tr>
<td><strong>Melanesia</strong></td>
</tr>
<tr>
<td>Fiji Islands</td>
</tr>
<tr>
<td>New Caledonia</td>
</tr>
<tr>
<td>Papua New Guinea</td>
</tr>
<tr>
<td>Solomon Islands</td>
</tr>
<tr>
<td>Vanuatu</td>
</tr>
<tr>
<td><strong>Micronesia</strong></td>
</tr>
<tr>
<td>FSM</td>
</tr>
<tr>
<td>Kiribati</td>
</tr>
<tr>
<td>Marshall Islands</td>
</tr>
<tr>
<td>Nauru</td>
</tr>
<tr>
<td><strong>Polynesia</strong></td>
</tr>
<tr>
<td>Cook Islands</td>
</tr>
<tr>
<td>French Polynesia</td>
</tr>
<tr>
<td>Samoa</td>
</tr>
<tr>
<td>Tonga</td>
</tr>
<tr>
<td>Tuvalu</td>
</tr>
</tbody>
</table>
Fertility

Assumed fertility was specified in terms of the total fertility rate (i.e., the number of children a woman would have if she experienced current fertility rates over the course of her reproductive life). There were two fertility assumptions for each country. The first was an extrapolation of past trends, which are of gradual decline. The second was an acceleration of past trends. These assumptions are shown in Table 2.2. The age pattern of fertility was assumed to converge towards a suitable pattern based on the early, intermediate, and late childbearing patterns (at replacement level) of the United Nations (1998). For all countries except Cook Islands, the gradual decline involved the assumption that the pattern would converge to the average of the UN intermediate and late patterns in 2029. For Cook Islands, where childbearing is relatively early, the intermediate pattern was assumed. For the accelerated fertility decline, the late UN pattern was assumed for all countries by 2029. These patterns are shown in Figure 2.1. Interpolation between the current fertility pattern and the assumed pattern in 2029 was with respect to the total fertility rate.

| Table 2.2: Assumed Total Fertility Rate by Period: Gradual and Accelerated Fertility Declines |
|-----------------------------------------------|-----------------------------------------------|
| | Gradual decline | Accelerated decline |
| **Melanesia** | | | | | | | | | | | | |
| Fiji Islands | 2.96 | 2.91 | 2.86 | 2.80 | 2.75 | 2.70 | 2.88 | 2.72 | 2.57 | 2.41 | 2.26 | 2.10 |
| New Caledonia | 2.38 | 2.32 | 2.27 | 2.21 | 2.16 | 2.10 | 2.36 | 2.27 | 2.18 | 2.09 | 1.99 | 1.90 |
| Papua New Guinea | 4.52 | 4.41 | 4.31 | 4.21 | 4.10 | 4.00 | 4.38 | 4.10 | 3.83 | 3.55 | 3.28 | 3.00 |
| Solomon Islands | 4.66 | 4.42 | 4.19 | 3.96 | 3.73 | 3.50 | 4.52 | 4.11 | 3.71 | 3.31 | 2.90 | 2.50 |
| Vanuatu | 4.67 | 4.53 | 4.40 | 4.27 | 4.13 | 4.00 | 4.50 | 4.20 | 3.90 | 3.60 | 3.30 | 3.00 |
| **Micronesia** | | | | | | | | | | | | |
| FSM | 4.28 | 4.12 | 3.97 | 3.81 | 3.66 | 3.50 | 4.14 | 3.81 | 3.48 | 3.16 | 2.83 | 2.50 |
| Kiribati | 4.24 | 4.09 | 3.94 | 3.80 | 3.65 | 3.50 | 4.10 | 3.78 | 3.46 | 3.14 | 2.82 | 2.50 |
| Marshall Islands | 5.44 | 5.05 | 4.67 | 4.28 | 3.89 | 3.50 | 5.28 | 4.72 | 4.17 | 3.61 | 3.06 | 2.50 |
| Nauru | 3.86 | 3.69 | 3.52 | 3.34 | 3.17 | 3.00 | 3.79 | 3.53 | 3.28 | 3.02 | 2.76 | 2.50 |
| **Polynesia** | | | | | | | | | | | | |
| Cook Islands | 2.83 | 2.77 | 2.70 | 2.63 | 2.57 | 2.50 | 2.77 | 2.63 | 2.50 | 2.37 | 2.23 | 2.10 |
| French Polynesia | 2.38 | 2.32 | 2.27 | 2.21 | 2.16 | 2.10 | 2.36 | 2.27 | 2.18 | 2.09 | 1.99 | 1.90 |
| Samoa | 4.54 | 4.43 | 4.32 | 4.21 | 4.11 | 4.00 | 4.43 | 4.14 | 3.86 | 3.57 | 3.29 | 3.00 |
| Tonga | 3.69 | 3.55 | 3.41 | 3.28 | 3.14 | 3.00 | 3.62 | 3.40 | 3.17 | 2.95 | 2.72 | 2.50 |
| Tuvalu | 3.63 | 3.50 | 3.38 | 3.25 | 3.13 | 3.00 | 3.57 | 3.36 | 3.14 | 2.93 | 2.71 | 2.50 |

Figure 2.1: Age Patterns of Assumed Fertility


In terms of the present and assumed total fertility rates the countries broadly fall into three groups:

- The total fertility rate in French Polynesia and New Caledonia falls to the population replacement level (2.1) by 2029 with the continuation of current trends and below the replacement level by 2029 under the accelerated decline assumption.

- The total fertility rate in Cook Islands and Fiji Islands declines to the replacement level by 2029 under the accelerated decline assumption, while remaining above the replacement level given the continuation of current trends.

- In the remaining countries the total fertility rate is still well above the replacement rate by 2029, even under the accelerated decline assumption.

The third group of countries are still well short of completing the demographic transition and even under the accelerated decline assumption rapid population growth will continue for a very considerable period.

Migration

Assumptions about the level of net migration were based on available data to the extent possible. Expert opinion was also employed. Two initial assumptions were made. The first assumption was a constant level over time and set at the current level. The second was a continuation of past trends, whether increasing or decreasing: the same level as in the constant assumption was assumed for 2004-09 with increases of 10 percent per period assumed in the absolute level of net migration. These assumptions are shown in Table 2.3. In addition, for the Pacific island countries with high levels of net out-migration, namely Cook Islands, Samoa and Tonga, a third assumption was included which incorporated a rapid reduction in net out-migration. The level of net migration was assumed to be reduced by 50 percent in the first period (2004-09), reduced again by 50 percent in 2009-2014, and constant thereafter; these values are also shown in Table 2.3. This third assumption models the possibility of much tighter controls on immigration by the governments of receiving countries, such as Australia, Canada, New Zealand, and the United States.

In the absence of data on the age pattern of migration, the simplified Rogers-Castro (1981) model of
migration was applied. The model age pattern of migration is shown in Figure 2.2. This model is essentially a model of labour migration with dependants, which is suitable for the Pacific islands. For most countries, the temporary migration of young people for studies overseas is adequately represented by the model. This is so because the Rogers-Castro model has a relatively young peak (at age 20-24), which is the age at which most Pacific island students out-migrate. Their return migration a few years later is not apparent in the net pattern because these in-migrants are more than counterbalanced by labour out-migration, which in the Pacific occurs at somewhat older ages than the peak in the model suggests. However, for Cook Islands a modified pattern was required in order to maintain some regularity in the projected population age structure. This modified pattern, which represents relatively early migration at higher levels, is also shown in Figure 2.2. Modifications of the Rogers-Castro model were also required for Samoa and Tonga in order to broadly model the existing effect of migration on the respective age structures. For Samoa, the pattern of net migration is relatively early, while for Tonga it is relatively late. Both patterns account for return migration, which counterbalances labour migration at ages 30 to 34 for Samoa and 35 to 39 for Tonga. These patterns are also shown in Figure 2.2.

Table 2.3: Migration Assumptions: Net Migration Per Five-Year Period

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Melanesia</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fiji Islands</td>
<td>-25,000</td>
<td>-25,000</td>
<td>-27,500</td>
<td>-30,250</td>
<td>-33,250</td>
<td>-36,500</td>
</tr>
<tr>
<td>New Caledonia</td>
<td>5,000</td>
<td>5,000</td>
<td>5,500</td>
<td>6,050</td>
<td>6,650</td>
<td>7,300</td>
</tr>
<tr>
<td>Papua New Guinea</td>
<td>-1,000</td>
<td>-1,000</td>
<td>-1,100</td>
<td>-1,210</td>
<td>-1,330</td>
<td>-1,460</td>
</tr>
<tr>
<td>Solomon Islands</td>
<td>-500</td>
<td>-500</td>
<td>-550</td>
<td>-605</td>
<td>-665</td>
<td>-730</td>
</tr>
<tr>
<td>Vanuatu</td>
<td>-200</td>
<td>-200</td>
<td>-220</td>
<td>-242</td>
<td>-266</td>
<td>-292</td>
</tr>
<tr>
<td>Micronesia</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FSM</td>
<td>-3,500</td>
<td>-3,500</td>
<td>-3,850</td>
<td>-4,235</td>
<td>-4,655</td>
<td>-5,110</td>
</tr>
<tr>
<td>Kiribati</td>
<td>-500</td>
<td>-500</td>
<td>-550</td>
<td>-605</td>
<td>-665</td>
<td>-730</td>
</tr>
<tr>
<td>Marshall Islands</td>
<td>-1,500</td>
<td>-1,500</td>
<td>-1,650</td>
<td>-1,815</td>
<td>-1,995</td>
<td>-2,190</td>
</tr>
<tr>
<td>Nauru</td>
<td>-500</td>
<td>-500</td>
<td>-550</td>
<td>-605</td>
<td>-665</td>
<td>-730</td>
</tr>
<tr>
<td>Polynesia</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cook Islands</td>
<td>-1,500</td>
<td>-1,500</td>
<td>-1,650</td>
<td>-1,815</td>
<td>-1,995</td>
<td>-2,190</td>
</tr>
<tr>
<td>French Polynesian</td>
<td>3,500</td>
<td>3,500</td>
<td>3,850</td>
<td>4,235</td>
<td>4,655</td>
<td>5,110</td>
</tr>
<tr>
<td>Samoa</td>
<td>-15,000</td>
<td>-15,000</td>
<td>-16,500</td>
<td>-18,150</td>
<td>-19,950</td>
<td>-21,900</td>
</tr>
<tr>
<td>Tonga</td>
<td>-7,500</td>
<td>-7,500</td>
<td>-8,250</td>
<td>-9,075</td>
<td>-9,975</td>
<td>-10,950</td>
</tr>
<tr>
<td>Tuvalu</td>
<td>-250</td>
<td>-250</td>
<td>-275</td>
<td>-303</td>
<td>-334</td>
<td>-368</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Reduced net migration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cook Islands</td>
<td>-750</td>
</tr>
<tr>
<td>Samoa</td>
<td>-7500</td>
</tr>
<tr>
<td>Tonga</td>
<td>-3750</td>
</tr>
</tbody>
</table>

Note. Changing net migration refers to the net volume regardless of the direction of the flow.
For Fiji, the situation with regard to students is somewhat different because of the location of the University of the South Pacific in Suva. However, the base population does not include most students because the census is taken in August during the vacation. Most overseas students enter and leave Fiji within three or four years, often within the same 5-year age group, thereby being recorded as zero net migration. In addition, in comparison with the high volume of labour out-migration and associated dependants currently experienced by Fiji, student migration is not a major component of overall net migration. The Rogers-Castro model appears to adequately represent migration for Fiji.

Figure 2.2: Rogers-Castro Simplified Model of Age-Specific Net Migration Rates and Modified Model

New Caledonia and French Polynesia differ from the other Pacific island countries in that net migration is positive, reflecting labour migration for employment in the mining and associated SMelting industries in New Caledonia and in administrative and professional employment in French Polynesia. At the same time, students leave these territories to study in France; creating relative deficits in the age groups 15 to 29, particularly in the 20-24 years age group. The Rogers-Castro model was modified in order to take account of both student migration and the in-migration of labour. This modified model, also shown in Figure 2.2, has the effect of maintaining a deficit at ages 15 to 29, on the assumption that student migration will continue, while at the same time modelling labour immigration.

The age patterns of net migration in Figure 2.2 are expressed in terms of age-specific net migration rates. When applied to the actual or projected male and female populations, these rates give implied net migration by age and sex, the sum of which is the implied total volume of net migration. The ratio of this (positive) implied total and the assumed (mostly negative) annual total was used to adjust the implied age-sex-specific numbers to obtain assumed net migration by age and sex. Thus, though the net migration rates used are the same for each population, the age distribution of migrants differs among populations because it is also based on population structure. The model is used for both net immigration and net emigration, according to the assumed annual total.

The relatively tiny numbers for net migration from three of the Melanesian countries—Papua New Guinea, Solomon Islands, and Vanuatu—reflect the limited numbers of skilled people from these countries who could emigrate and the limited opportunities available for the relatively large numbers of unskilled people to move overseas. That the assumed numbers for future net migration from these countries show little increase reflects our belief that the opportunities for emigration for low-skilled and unskilled labour will remain very limited.
Net emigration from Fiji Islands is assumed to increase from the high levels that followed the 1987 coups and were reinforced by the 2000 coup. The extensive discrimination against Indo-Fijians remains, and this situation is not expected to improve. Indo-Fijian families continue to put emphasis upon education for their children in order to improve their chances to move overseas permanently. Subsequent movement of parents and other relatives should maintain the migration momentum.

The net migration assumptions for the low-lying, atoll island countries—such as Kiribati, Nauru, and Tuvalu—exclude the possibility of catastrophic events that would make living conditions more difficult than at present. However, currently the possibilities for sustainable livelihoods and the maintenance of essential services in Nauru appear very limited and there is the likelihood that most of the population will have to leave the island at some point.

Scenarios

The combination of the above assumptions resulted in four scenarios for each population, plus two additional scenarios for Cook Islands, Samoa, and Tonga that incorporated the reduced out-migration assumption. Table 2.4 details the assumptions for each scenario.

Table 2.4: Scenarios: Combination of Assumptions

<table>
<thead>
<tr>
<th>Scenario 1</th>
<th>Mortality</th>
<th>Fertility</th>
<th>Migration</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Gradual decline</td>
<td>Gradual decline</td>
<td>Constant</td>
</tr>
<tr>
<td>Scenario 2</td>
<td>Gradual decline</td>
<td>Gradual decline</td>
<td>Increasing</td>
</tr>
<tr>
<td>Scenario 3</td>
<td>Gradual decline</td>
<td>Accelerated decline</td>
<td>Constant</td>
</tr>
<tr>
<td>Scenario 4</td>
<td>Gradual decline</td>
<td>Accelerated decline</td>
<td>Increasing</td>
</tr>
<tr>
<td>Scenario 5</td>
<td>Gradual decline</td>
<td>Gradual decline</td>
<td>Reduced</td>
</tr>
<tr>
<td>Scenario 6</td>
<td>Gradual decline</td>
<td>Accelerated decline</td>
<td>Reduced</td>
</tr>
</tbody>
</table>

Note. Scenarios 5 and 6 apply to Cook Islands, Samoa, and Tonga only.

Results

The population projections were derived using the cohort-component method (Preston, Heuveline, and Guillot, 2001). Starting with a 2004 base population by 5-year age group and sex, assumptions about mortality, fertility, and net migration (also by 5-year age group and sex) were applied to advance the population forward in steps of 5 years. Summary tables of the projection results for the various scenarios are shown in Annex A. The projected changes in population by 2029 for all countries under the base case assumptions are shown in Table 2.5. The Melanesian and Micronesian countries are projected to have the fastest growth rates.

Table 2.5: Projected Population Change 2004-2029, Base Case (percentage)

<table>
<thead>
<tr>
<th>Melanesia</th>
<th>Micronesia</th>
<th>Polynesia</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fiji</td>
<td>25.5</td>
<td>FSM 59.6</td>
</tr>
<tr>
<td>New Caledonia</td>
<td>37.5</td>
<td>Kiribati 72.7</td>
</tr>
<tr>
<td>Papua New</td>
<td>72.2</td>
<td>Marshall Islands 82.4</td>
</tr>
<tr>
<td>Solomon Islands</td>
<td>75.3</td>
<td>Nauru 26.0</td>
</tr>
<tr>
<td>Vanuatu</td>
<td>89.7</td>
<td></td>
</tr>
</tbody>
</table>
With its low total fertility rate and high net emigration, Cook Islands’ population is projected to decline under all scenarios, except under the assumption of a sharp decrease in net emigration. With its current high total fertility rate, Samoa’s population is projected to go into decline (by the 2019-24 period) only under the assumptions of accelerated fertility decline and accelerated emigration. However, assuming a sharp reduction in net emigration and without the faster rate of fertility decline, Samoa’s population is projected to increase at above 2 percent per year. Because of its lower total fertility rate, Tonga’s population could go into decline as early as the 2014-19 period with an accelerated decline in fertility and higher net emigration. Assuming a sharp reduction in net emigration from Tonga leads to higher rates of population growth than currently shown, but not as high as in the case of Samoa.

Given its relatively high net emigration, a sharper decline in the total fertility rate in Fiji is projected to lead to population growth at quite low levels. The picture for Fiji would be much clearer if the projections had been undertaken by splitting the population into Indigenous-Fijians and Indo-Fijians and others as the total fertility rate of Indo-Fijian women is much lower than that of Indigenous-Fijian women. With a total fertility rate below replacement, the Indo-Fijian part of the Fijian population can be considered to have passed through the demographic transition. Hence, the prospects for a much lower fertility rate in Fiji depend mainly on reductions in fertility among Indigenous-Fijians.

The Federated States of Micronesia (FSM) has a high total fertility rate and high net emigration. Without the higher net migration, FSM would have a similarly high population growth rate to that of Kiribati, Marshall Islands, Papua New Guinea, and the other Melanesian countries. Nauru and Tuvalu have much the same size populations and much the same total fertility rates. However, because Nauru’s net emigration is double that of Tuvalu, Nauru is projected to experience slower population growth.

French Polynesia and New Caledonia have relatively low total fertility rates, which are assumed to decline to replacement level over the projection period. However, if the high net inward migration continues, as assumed, the population growth rate of these countries will remain relatively high for the next 10-15 years. If not, the population growth rate will fall quickly.

Kiribati, Marshall Islands, Papua New Guinea, Solomon Islands, and Vanuatu have relatively high total fertility rates and low to very low levels of net migration. As a result, they currently have high population growth rates. Unless the decline in their fertility rates accelerates, they will continue to experience population growth rates in excess of 2.0 percent. In the base case, populations in these countries increase by 70 to 90 percent over the projections period. For instance, in the base case, Vanuatu’s population almost doubles from its 2004 level of 215,800 to 409,500 by 2029. In the base case scenario, Solomon Islands’ population increases from 461,000 to 806,500, which would give it a population nearly as large Fiji’s. Over the same period, Papua New Guinea’s population grows from 5.7 million to 9.8 million. It is an indication of the importance of the fertility rate in population growth that, under the assumption of accelerated decline in the total fertility rate in Papua New Guinea, its population is projected to be close to one million less by 2029 than in the base case.

### Section 2.3 Formal Employment Projections

The intention for this report was to gather sufficient data to be able to make time series-based projections of formal sector employment for the Pacific countries. The intent was to use sectoral breakdowns of employment and output to make projections of employment from sectoral labour-output ratios and projections of gross domestic product (GDP). However, only Fiji has sectoral disaggregation of output and employment of a sufficiently long period to provide a reasonable basis for projections. In fact, only nine of the Pacific countries had published data of any kind on formal employment. Cook Islands, FSM, Marshall Islands, and Solomon Islands have some sectoral disaggregation of formal employment and output, but it is limited and for only a few years and mostly
not recent data. Kiribati, Papua New Guinea, Samoa, Tonga, and Vanuatu have some data on aggregate employment, but it provides no basis for making projections of formal employment growth.

Consequently, where sufficient employment data were available, simple time series extrapolations up to 2015 were made. Where the employment data were too limited to make time series projections but trends in GDP could be estimated, projections of GDP were used to project employment growth. Therefore, leaving aside French Polynesia and New Caledonia as being of less interest from the point of view of emigration and remittances, simple time series-based projections of formal sector employment have been made to 2015 for only four countries: Cook Islands, Fiji Islands, FSM, and Solomon Islands. For Marshall Islands, Papua New Guinea, Samoa, Tonga, and Vanuatu, guesstimates of formal sector employment growth have been made in order to estimate the potential number of people that could seek overseas employment.

The most recent formal sector employment numbers for the nine countries are shown in Table 2.6. Table 2.6 also gives the working-age population for these countries (these numbers were taken from the 2004 population cohorts used in the population projections exercise). The working-age population is usually taken to be 15-64 years. However, in the Pacific, 15-54 years is considered to be a more relevant working lifetime.

The final column of Table 2.6 shows formal sector employment as a percentage of the working-age population (formal sector employment participation rates). In terms of the percentages shown, the countries can be placed in three groups. First, there are Cook Islands, Samoa, and Tonga with high percentages (63 to 81 percent) of formal sector employment to working-age population. These are the countries with the highest net emigration; modelling consistent with the population age structures (Figure 2.2) shows that there are many people of working age who can be expected to find jobs in metropolitan cities. In another grouping are Papua New Guinea, Solomon Islands, and Vanuatu; countries with very low levels of formal sector employment (ranging from participation percentages of 5.6 percent in the case of Papua New Guinea to 14.7 percent for Vanuatu). These countries have very little migration, higher total fertility rates, and lower life expectancy by comparison.

<table>
<thead>
<tr>
<th>Country</th>
<th>Total formal sector employment (year)</th>
<th>Population in 2004</th>
<th>Working-age population (15-54) in 2004 (% of total)</th>
<th>Formal sector employment/working-age population (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cook Islands</td>
<td>5,900</td>
<td>14,000</td>
<td>7,276</td>
<td>81.1</td>
</tr>
<tr>
<td>Fiji Islands</td>
<td>120,000</td>
<td>836,000</td>
<td>487,450</td>
<td>24.6</td>
</tr>
<tr>
<td>FSM</td>
<td>15,137</td>
<td>112,712</td>
<td>61,786</td>
<td>24.5</td>
</tr>
<tr>
<td>Marshall Islands</td>
<td>10,300</td>
<td>55,370</td>
<td>29,614</td>
<td>34.8</td>
</tr>
<tr>
<td>Papua New</td>
<td>187,234</td>
<td>5,695,300</td>
<td>3,320,217</td>
<td>5.6</td>
</tr>
<tr>
<td>Samoa</td>
<td>57,100</td>
<td>182,750</td>
<td>91,131</td>
<td>62.7</td>
</tr>
<tr>
<td>Solomon Islands</td>
<td>22,177</td>
<td>460,100</td>
<td>239,362</td>
<td>9.3</td>
</tr>
<tr>
<td>Tonga</td>
<td>34,600</td>
<td>98,323</td>
<td>51,824</td>
<td>66.9</td>
</tr>
<tr>
<td>Vanuatu</td>
<td>16,300</td>
<td>215,836</td>
<td>110,976</td>
<td>14.7</td>
</tr>
</tbody>
</table>

*a Sourced mainly from Asian Development Bank (2005). Adjustments have been made based on data from the Secretariat of the Pacific Community and other data.

*b Population and Working-age Population in 2004 are from the base population of the population projections.
c Formal sector employment in Papua New Guinea is said to include only jobs in urban centres.

d In 1996, formal sector employment in Solomon Islands was shown as 34,200. Comparison with the figure for 2002 illustrates the impact of the civil unrest of 1997 to 2002 on formal employment.

e Figures in parentheses in this column are the number of people aged 15 to 54 years expressed as a percentage of the total population.

f Formal sector employment in Vanuatu over the period 2000 to 2004 is said to include jobs in agriculture only where they are involved in ‘large scale plantation type businesses’. In 1989 when this definition of formal sector employment was not used, and presumably employment in other parts of agriculture was included, formal sector employment was 66,600.

In between these two groups are Fiji Islands, FSM, and Marshall Islands with formal sector employment participation rates ranging from 24.5 percent in the case of FSM to 34.8 percent for Marshall Islands. These countries have medium-level net emigration, reducing the numbers of working age remaining in the country. In the case of Fiji, the coups have seen a concentration of employable Indo-Fijians leaving for industrialised countries. As regards FSM and Marshall Islands, without their high to very high levels of public service employment—supported by US aid as well as open entry to the United States—formal sector employment participation in these countries would look much like that of Papua New Guinea, Solomon Islands, and Vanuatu.

As noted earlier, two questions were posed for this research: How many formal sector jobs will be available annually (job openings) for those seeking entry into the labour market in the Pacific countries? And, as a consequence: How many of those of working age will likely not find formal sector jobs and be potential applicants for employment overseas? The latter question could also be posed as the size of the challenge for government in creating the necessary conditions for growth in investment and jobs and solving their problems of unemployment and under-employment.

Answers to the first question depend upon (a) the projected increase in the total number of jobs and (b) exits from the formal-sector labour force due to retirement, sickness, and death. In the absence of any information about the number of people actually seeking work, the only answer to the second question is the difference between the working-age population and the number in formal sector employment. Of course, this figure is approximate and will be an upper limit as older people in the working-age population will be less likely to be looking for work overseas. As well, the potential formal-sector labour force participation of females can be expected to be less than that of males. Furthermore some people will be comfortable with their subsistence livelihoods and have no desire to undertake further education and training and move into formal employment.

In answering the first question, we have to make assumptions about (a) the age structure of those employed; (b) the age of retirement; and (c) exits due to sickness, etc. While it is unlikely to be correct, a reasonable guess about the age structure of the workforce is that it is the same as the population. As noted earlier, the de facto retirement age is taken as 55 years. As regards exits due to sickness, it is assumed that the numbers of those exiting due to sickness are the same as those working past retirement.

Take the case of Fiji Islands for example. The latest available information states that there were about 120,000 in formal sector employment in 2003. Based on past trends, this extrapolates to 122,000 employees in 2004, an increase of 2,000. If the workforce has the same age structure as the population, the approximate number of retirements from the workforce in 2004 would be 1,200. If the number exiting the workforce due to sickness or other reasons is the same as the number staying on after the assumed de facto retirement age of 55 years, then there would have been a total of 3,200 job openings in 2004. If the workforce has a different age structure than the population, then the number of retirements could be more or less than 1,200.
Because of the absence of good data, estimates of the number of annual job opportunities in the Pacific island countries have not been carried out. However, this exercise for Fiji can be used to show that the number of formal job openings in any year is greater than the increase in the number of formal jobs. Statements are often made in the Pacific countries comparing the numbers of children expected to leave school with the annual increase in employment. However, as this simple exercise shows, the number of job openings can be considerably more than the increase in the number of jobs.

**Employment Projection Results**

We now turn to the projection of formal sector employment for the Pacific island countries. When these projections are taken together with the projections of the numbers of working age, it allows us to make estimates of the numbers not employed in the formal sector and therefore of the potential supply of labour for overseas employment. The results of the projections exercise for formal employment are shown in Table 2.7. Projections were made only to 2015 as the weak databases make longer-term projections of little value.

**Table 2.7: Projections of Formal Sector Employment in Selected Pacific Countries, 2004 and 2015**

<table>
<thead>
<tr>
<th>Country</th>
<th>Employment 2004</th>
<th>Employment 2015</th>
<th>Percentage change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cook Islands</td>
<td>5,900</td>
<td>6,000</td>
<td>1.7</td>
</tr>
<tr>
<td>Fiji Islands</td>
<td>122,000</td>
<td>145,880</td>
<td>19.6</td>
</tr>
<tr>
<td>FSM</td>
<td>15,350</td>
<td>16,470</td>
<td>7.3</td>
</tr>
<tr>
<td>Marshall Islands</td>
<td>10,480</td>
<td>11,270</td>
<td>7.5</td>
</tr>
<tr>
<td>Papua New Guinea</td>
<td>205,870</td>
<td>226,460</td>
<td>10.0</td>
</tr>
<tr>
<td>Samoa</td>
<td>59,000</td>
<td>63,425</td>
<td>7.5</td>
</tr>
<tr>
<td>Solomon Islands</td>
<td>30,070</td>
<td>32,360</td>
<td>7.6</td>
</tr>
<tr>
<td>Tonga</td>
<td>35,820</td>
<td>37,610</td>
<td>5.0</td>
</tr>
<tr>
<td>Vanuatu</td>
<td>16,300</td>
<td>17,820</td>
<td>10.0</td>
</tr>
</tbody>
</table>

Formal sector employment in Cook Islands is projected to barely increase over the period to 2015. This appears reasonable in view of the continuing loss of population. If one of the more pessimistic projections of population loss for Cook Islands is realised, employment may well decline. The almost 20 percent increase in employment in Fiji does appear possible. While the garment and sugar industries will continue to shrink, tourism, which is a fairly labour-intensive industry, should expand and provide jobs growth. Not much jobs growth is expected in FSM and Marshall Islands however. Already, public sector employment is a significant share of total employment, and private sector activity is limited. Private sector activity is not expected to increase much, and there are limited prospects for public sector growth that is already heavily supported by aid.

Formal sector employment growth has been very limited in Papua New Guinea, Solomon Islands, and Vanuatu. Without substantial improvements in the investment environment, there are limited prospects for private sector growth. Moreover, there will be continuing pressures on these countries to reduce their public sector employment. Therefore, a 7.5 to 10 percent increase in employment over the next ten years seems reasonable. There are extremely limited employment data available for Samoa and Tonga and the reliability of the data is questionable. In particular, it is not clear how well the available data represent only formal sector employment, or the extent to which informal subsistence activity is included. Samoa has put in place some sound economic reforms and should see some benefit in terms of employment. Tonga has begun to implement economic reforms. However, it is likely that these
reforms will lead to decreases in public sector jobs, and it may be some time before conditions are more favourable for increases in private sector activity. Therefore, the projected increase in formal employment for Samoa is larger than that for Tonga.

SECTION 2.4 POTENTIAL FOR OVERSEAS EMPLOYMENT

Putting the population and employment projections together, we can obtain estimates of the potential excess supply of labour or potential demand for overseas employment in the nine Pacific countries under the various population projection scenarios. In Table 2.8, the projections of the working-age population not employed in the formal sector in 2015 are shown for the base case population projections (i.e., where the fertility rate is assumed to continue to decline at recent trend rates and net migration is assumed to continue at the recent estimated level).

These projections can be compared with the present situation by comparing the formal sector employment participation rates in Tables 2.6 and 2.8; this is done in Figure 2.3. The participation rates increase significantly in the high net migration countries—Cook Islands, Fiji Islands, Samoa, and Tonga—as might be expected with the continued loss of people of working age. Conversely, for the very low net migration/high fertility/low formal sector employment countries—Papua New Guinea, Solomon Islands, and Vanuatu—participation rates remain low and change little. Low jobs growth and high fertility more than offsets the reasonably high net migration in the two US Compact countries—FSM and Marshall Islands—such that participation rates decline. The extremely high participation rate for Cook Islands in 2004 and the even much higher rate projected for 2015 raises doubts on two counts. First, the published figures for recent formal sector employment appear unrealistically high. Second, if net emigration continues at the projected rates, the likelihood of formal sector employment increasing—even at the very low rate projected—appears low.

The projected changes in excess labour supply figures between 2004 and 2015 (comparing columns 1 and 4 in Table 2.8) are worrisome in several cases but overall not surprising. The large increases in the Melanesian countries (except Fiji with a more moderate increase), driven by the large increases in working-age population and low jobs growth, are no doubt widely expected but not any less a cause for concern. The relatively large increases in FSM and Marshall Islands are also driven by the same factors.

Under the base case assumptions, the trends in working-age population to 2029 continue with numbers in Cook Islands declining dramatically and with these cohorts increasing very sharply in the Melanesian countries other than Fiji. Under population projection scenario IV (wherein fertility declines and net migration accelerates), there is not much change in the working-age population in these Melanesian countries by 2015; thus the results for the excess supply of labour differ little from those shown in Table 2.8. However, by 2029 there are very much larger changes in the working-age population. For example, by 2029 Papua New Guinea’s working-age population totals 5.1 million; Solomon Islands’ working-age population totals 436,670; and Vanuatu’s working-age population is projected to be 209,320—almost double what it was in 2004. Therefore, even under these more favourable assumptions without dramatic increases in formal sector employment, the supplies of excess labour in the Pacific will have increased significantly.
Table 2.8: Potential Supply of Labour for Overseas Employment in 2004 and 2015,
Population projections Base Case

<table>
<thead>
<tr>
<th></th>
<th>2004</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Working-age population not employed in the formal sector</td>
<td>Working-age population</td>
</tr>
<tr>
<td>Cook Islands</td>
<td>1,376</td>
<td>6,685</td>
</tr>
<tr>
<td>Fiji Islands</td>
<td>365,450</td>
<td>516,625</td>
</tr>
<tr>
<td>FSM</td>
<td>46,436</td>
<td>72,619</td>
</tr>
<tr>
<td>Marshall Islands</td>
<td>19,134</td>
<td>35,572</td>
</tr>
<tr>
<td>Papua New Guinea</td>
<td>3,114,347</td>
<td>3,898,856</td>
</tr>
<tr>
<td>Samoa</td>
<td>32,131</td>
<td>98,777</td>
</tr>
<tr>
<td>Solomon Islands</td>
<td>209,292</td>
<td>312,060</td>
</tr>
<tr>
<td>Tonga</td>
<td>16,004</td>
<td>53,808</td>
</tr>
<tr>
<td>Vanuatu</td>
<td>94,776</td>
<td>147,281</td>
</tr>
</tbody>
</table>

a The working-age population is taken as those of ages 15 to 54 years.
b Numbers in parentheses in column 3 are projected formal sector employment participation rates.

Figure 2.3: Formal Sector Participation Rates, Circa 2002 and 2015

In the scenarios (V and VI) of restricted emigration for Cook Islands, Samoa, and Tonga, the outlook is very different. With accelerated fertility decline but reduced net migration, the working-age population in Cook Islands in 2015 is projected to be 8,210 instead of the projected 6,685 in the base case (Table 2.8). In the case of Samoa, the 2015 figure is 113,900 as compared to the base case figure of 98,777. And for Tonga the projection of the working-age population increases from 53,808 to 61,107. Under this scenario there will likely be considerably higher excess supply of labour in these countries.
**SECTION 2.5 CONCLUSION**

The results of these projections should be the least surprising but the most worrying for the Melanesian and Micronesian countries. Fertility rates are high and appear to be coming down only slowly, contributing to projected population growth of as much as 2.5 percent per annum. We have also simulated faster declines in fertility on the basis of experience elsewhere; the fertility rates in the Pacific Region may well decline faster than assumed in the base case. Even with such accelerated declines, however, significant population growth will continue for many years because of the population momentum that has been built up in the Micronesian and Melanesian countries because their fertility rates have remained high while mortality rates have declined.

Formal sector employment is very low and, except for Fiji, is projected to grow very slowly. Those countries with high fertility rates and low formal sector employment will generate the most excess labour and have the greatest demand for overseas employment. The high projected levels of excess supply of labour for the formal sector indicate the enormous challenge that the Papua New Guinea and Pacific island country governments have in front of them. The other side of this coin is that in the Pacific Region there will be an increasingly larger pool of young people from which those countries with ageing populations will be able to draw.
References


Notes

1 These countries do not have unemployment benefit schemes and therefore unemployment figures are not a useful measure of the numbers of people looking for work. Anyone not employed in the formal sector will have to find some other means of earning an income. This will be in the informal sector (legal or illegal) or in the subsistence sector. If people are unable to work, they will have to be looked after by relatives.


3 Secretariat of the Pacific Community, www.spc.org.nc/demog/.
CHAPTER 3. CENTS AND SENSIBILITY: THE ECONOMIC BENEFITS OF REMITTANCES

In many Pacific island countries the remittances that flow from international migrants are a prominent feature of the national economy. Yet there are very few detailed studies of remittances that use survey-based data and employ appropriate empirical methods for analysis. Thus, existing information has been inadequate in informing us on the use of remittances, on their real and potential contribution to domestic incomes and economic development, on their influence on social change or continuity, and the extent to which migration and remittances contribute to inequality or on their ability to constitute a safety net.

Section 3.1 Introduction

One of the main objectives of this chapter is to address empirically some of these key issues based on a survey of migrant and non-migrant households undertaken in Fiji and Tonga in 2005. The purpose of this household survey was to gather information for statistical analysis of households’ receipt of migrant remittances from abroad; specifically their magnitude, forms, channels, and impacts in relation to household income, saving, and social protection. This study does not address many other issues, including the extent to which remittances are sensitive to variables like foreign exchange rates, and relative rates of interest and inflation, and the possible influences of remittances on the real exchange rate.

This chapter consists of three main points of focus. First, it presents selected descriptive survey data in the form of tables and charts relating to characteristics of migrant households, some details of the migrants, and details of remittances, including their incidence, levels, forms, and channels, from a country comparative perspective. Comparisons between Fiji and Tonga are motivated by their different migration histories and remittance behaviours. As is shown throughout this study, Tonga, with over 40 years of intensive remittances-motivated migration, receives much larger per capita remittance flows and is more comparable to Samoa. In the case of Fiji, international migration is a much more recent phenomenon, but there are also important differences in migration histories between the two main ethnic groups, Indo- and Indigenous-Fijians. To date no reliable, survey-based data on migrants’ remittances exist for Fiji, making this a first ever such study. For Tonga, no comprehensive survey of remittances has been undertaken for over a decade. The survey updates and extends our knowledge about Tongan remittances.

Second, the study aims to test using appropriate econometric techniques, interrelationships between remittances, and selected micro-level drivers of economic growth, including household income from waged employment, fishing, agriculture, and other business activities; household saving and asset accumulation; and households’ levels of educational attainment. This focus is motivated primarily from the widely held—and mostly unsubstantiated—view that remittances in the South Pacific have not generally been invested productively and have possibly had negative moral hazard effects on the recipients’ incentives to engage in domestic income-generating activities or to save and invest, creating an ever-increasing dependence on external sources of income to maintain higher, import-dependent consumption levels. More specifically, the study aims to quantify the net effects on household-income sources of the combined impacts of the migrant’s absence and the inflow of...
remittances, taking into account how migration and remittances can have both positive and negative effects.

Third, the study aims to contribute to the analysis of the income-distribution and social protection implications of remittances, using the survey data to calculate various estimates of income distribution and poverty levels among households in the two countries. This focus is motivated by a concern among policymakers that migration opportunities are biased towards wealthier and better-educated households with easier access to international networks; therefore, the resulting flows of remittances are more likely to reinforce existing inequalities than reduce them. More specifically, the study estimates the impacts of remittances as well as other internal inter-household transfers on measures of income distribution (Gini coefficients) and of poverty. From the survey data on household assets, a 'wealth index' is also constructed using appropriate econometric methods; the impact of remittances on this index is assessed.

This chapter is structured as follows:

- **Section 3.2** serves as background to the study by presenting a brief account of recent migration from Fiji and Tonga; discussing some of the main characteristics of the two samples and their composition; and presenting descriptive statistics on selected characteristics of the sampled migrant households, migrant members, and the remittances received.

- **Section 3.3** uses the survey data to examine the interrelationships among migration, remittances, and household income. The results from the econometric analysis are reported in two parts. First are the combined effects of the absence of migrant members and inflows of remittances on household earnings from three main sources—(a) salaries and wages; (b) agricultural production (farming and fishing); (c) business activities. Second are the relationships between remittances and household saving, taking into account the possibility that remittances can both cause higher household saving and be caused by higher household saving.

- **Section 3.4** examines the relationship between migration and educational attainment of household members, and reports the results of the econometric analysis of the hypothesis that the incidence of migration (and remittances) can contribute positively to the acquisition of human capital, taking into account the possibility that migration decisions and education decisions may have common underlying influences.

- **Section 3.5** focuses on the poverty alleviation and income distribution aspects of remittances. It reports the results of the various measures and indexes of poverty and inequality constructed from the income, wealth, and remittances survey data.

- **Section 3.6** draws conclusions from the study.

Given the breadth of this study and its target audience, only the main findings of the econometric analysis are reported. The econometric procedures and more detailed results are described in Annexes C to F.

**SECTION 3.2**

**MIGRATION AND REMITTANCES IN FIJI AND TONGA**

The prospects for economic growth in the Pacific island countries are unusually limited; hence international migration since the 1960s has been substantial as the Pacific islands moved towards independence and became enmeshed in accelerated globalisation.
Background to Pacific Island Migration

In recent years several Pacific island countries have experienced difficult economic, environmental, and political circumstances that have made migration an increasingly attractive option. Already there are second and third generations of islanders living overseas for whom home is sometimes an uncertain and ambivalent concept. The extent to which these people will remit and even whether they can be described as islanders or migrants is not well known.\(^2\)

Much of the largest migration streams from the South Pacific islands have been from Polynesia; though there is now increasingly rapid migration from the independent Federated States of Micronesia (FSM), which were once part of the American colonial realm, and growing migration from Fiji. Migration flows have been particularly substantial from the two largest independent Polynesian states, Tonga and Samoa, where the situation has been documented through other detailed studies in the 1980s. In recent decades, despite the growing importance of migration, there has been limited information on its impact on the incomes and welfare of migrant-sending households.

Migration among Pacific islanders has been perceived primarily as a response to real and perceived inequalities in socioeconomic opportunities that are the result of uneven sectoral and regional development. In other words, migration remains a time-honoured strategy of moving from a poor area to a richer one in the search for social and economic mobility. In most of the independent Pacific island states of Polynesia and Micronesia, there is an almost universal recognition that the best social and economic opportunities lie overseas; hence aspiration to migrate abroad is now regarded as normal and the most appropriate response to limited domestic opportunities. Twenty-five years ago, four of the smallest states in the Region were described as MIRAB states, where high levels of migration, remittances and aid had combined to create a bureaucratic economic structure. Since then the acronym has been applied to other Pacific states and in many there is also an established ‘culture of migration’ (Bertram and Watters, 1985).

Growing expectations over what constitutes a satisfactory standard of living, a desirable occupation, and a suitable mix of services and amenities have influenced migration. New aspirations require cash income. In parallel with changing aspirations and the growing necessity to earn cash, agricultural work throughout the Pacific Region has been losing ground; in fact, the relatively limited and declining participation of young men in the agricultural economy is ubiquitous. In Tonga, for example, parents often expressed the wish that their children work at something better than agriculture, even though they themselves were farmers. Changes in values following increased educational opportunities and the expansion of bureaucratic (largely urban) employment in the Pacific in the 1970s, especially in the prelude to independence, further oriented migration streams away from the Region as local employment opportunities did not keep pace with population growth. This situation continued through the 1990s, which was also a period of rising unemployment and restructuring in much of the Region. The gap between expectations that were continually revised upwards and the reality of limited domestic employment and incomes thus widened.

Migration has reduced the level of open and disguised unemployment in the migrant-sending countries although there is also a growing concern that it has contributed to a loss of skilled human resources through brain drain. This is certainly true, for example, in the health sector in several states where more costly and less skilled replacements have been required (Brown and Connell, 2004). It is also believed that professionals and skilled workers are more likely to migrate following political or other social problems, as appeared to be the case in Fiji following the military coups in 1987 and 2000.

A distinctive feature of international migration in the Pacific is that migrants have typically tended to be settlers rather than temporary migrants, even though they may express (and sometimes act on) intentions to return home. Permanent migration is particularly true of many migrants from Fiji (mainly Indo-Fijians) and especially Tonga. This limits direct comparisons with other migration-remittance
states, such as the Philippines and Pakistan, where most migrants are on short-term contracts. In recent years there has been a growing demand primarily from Gulf countries for more temporary, contract migrants—which have been attracting growing numbers of temporary migrants from Fiji, mainly Indigenous-Fijians—and from growing labour-market pressures for short-term contract labour migration from the Asia-Pacific Region to Australia and New Zealand for both skilled and unskilled work. It is in this context that the potential economic benefits from remittances need to be assessed.

Fijian and Tongan Migration

Fiji and Tonga are two of the largest countries in the Pacific Region where both migration and remittances are of considerable significance. Tonga is smaller, a Polynesian state with a population of around 100,000 and where migration has been of considerable significance for several decades. It has a primarily agricultural domestic economy. Both aid and remittances are highly important in the absence of significant domestic economic growth and the collapse of a small-scale manufacturing economy. Along with neighbouring Samoa, Tonga has been dependent on a steady flow of remittances for four decades, has a population that has scarcely grown during that period, and has as many ethnic Tongans living overseas as at home. Again like Samoa, it represents what can be described as a mature migration-remittances economy. There has been significant skilled migration from Tonga. The consequence is that just over half of all ethnic Tongans now live outside Tonga. Unlike in Fiji, there has been no significant increase in migration in recent years; though future migration is likely to increase following the recent wage increases in the Tongan public sector and the probable consequence of a budget deficit and the scaling back of social services and public sector employment possibilities for new labour market entrants.

In the past, the larger economies of Melanesia have perhaps been more viable, and emigration largely absent. More recently there has been significant emigration from the larger state of Fiji (with a population of around 836,000), especially of Indo-Fijians. This dramatically accelerated after the 1987 and 2000 coups with migration mainly to Australia and New Zealand. Until the last decade, migration was not anywhere near the scale proportionately to that in Tonga; and remittances were of little significance. Unlike Tonga therefore, migration has been both more recent and less extensive; thus about 15 percent of Indigenous-Fijian and Indo-Fijians live overseas. In the past decade, however, the national economy—previously dependent on the trilogy of tourism, textiles and sugar—has experienced considerable problems with both sugar and textiles and thus growing levels of unemployment and rising poverty. Migration has become more diverse and now incorporates Indigenous-Fijians. New patterns of skilled migration have taken nurses to a diversity of destinations from the Marshall Islands and Palau to New Zealand and the United Arab Emirates; and rugby players beyond the ‘traditional’ destinations of New Zealand and Australia to Japan, the United Kingdom, and Europe (Brown and Connell, 2004).

Even newer patterns of emigration have become particularly important in the last couple of years with migration to the Middle East, emphasizing the manner in which new and financially attractive overseas employment opportunities are being firmly grasped even in an unappealing security and social context. In mid-2005 some 134 Indigenous-Fijian soldiers were deployed in Iraq; the government was contemplating sending another 90 to join the peacekeeping forces, continuing a long existing policy of Fijian soldiers working for the United Nations (as, for example in Lebanon). A second group of an estimated 1,000 Fijian soldiers were in Iraq as members of the British Army. Many former Fijian soldiers were employed as security guards for private companies in major Iraqi cities; other Fijians are employed in supportive roles in Kuwait in engineering, mechanical, and information technology.

Within little more than the last two years there has been a massive increase in the demand for migration. Thousands of people have paid registration fees of as much as US$85 although the number
of actual migrants was probably about 2,500. Recruitment has covered all regions of Fiji and appears to have focused entirely on Indigenous-Fijians. There is some evidence that the villages have played a direct role in selecting migrants, as they did during earlier migration schemes to New Zealand where preference was given to those who were relatively poor or otherwise disadvantaged. In other words, the structure of migration may have supported a move towards greater equity. There are however critical contemporary disadvantages both in the loss of some scarce skills to Fiji and in the very difficult circumstances under which migrants work (and some have died) in the Middle East.

As this study shows, international migration has become so substantial that in Fiji as many as one-third of all households had at least one overseas migrant (compared with 60 percent in Tonga), and 43 percent of households received remittances (compared with 90 percent in Tonga). This is a remarkably high percentage after a relatively short period of engagement in international labour migration and already reflects the substantial presence of Indigenous-Fijians in the security industry in the Middle East. Moreover, Indo-Fijian households are also remittance recipients contrary to earlier beliefs that few received remittances. It has been stated that the earnings of 250 Fijian soldiers working in Iraq for a UK security company totalled nearly US$3 million in a six-month period in 2004-5 with all that pay being sent back to bank accounts in Fiji. Other estimates in 2005 suggested that remittances to Fiji would reach about US$200 million for that year, well up from the US$30.3 million in 2002 but consistent with our estimate for 2004 of US$130 million (see Section 3.5). In Fiji therefore—even in the last three years—there has been explosive growth in the extent and significance of both migration and remittances. Some of these impacts are captured in this study.

Recent circumstances in Fiji emphasise and dramatise the ‘outward urge’ that has become so powerful in the Region. By contrast, in Tonga there is no real evidence of any significant changes in the structure and impact of migration in the past decade. Fiji by contrast represents a country where migration and remittances have grown in significance, as has the awareness of their importance on the part of the government and financial sector.

2005 Survey of Migrant Households and Remittances

The survey was prepared and conducted in the first half of 2005. (See Annex C for details of the design of the survey instrument, selection of enumeration areas, sampling, and survey administration.) The overall sample of 918 households was made up of 418 households in Fiji and 500 in Tonga; information was collected for the household and for each individual within the household giving a total of 4,663 sampled individuals, 1,937 in Fiji and 2,726 in Tonga.

The Fiji Sample

Fiji, with a population of 836,000, comprises 322 islands with approximately 110 of them inhabited; though the largest two islands, Viti Levu and Vanua Levu, are home to over 94 percent of the people. The main population centres that include the capital, Suva, are located in the main island, Viti Levu, which accounts for over 70 percent of the residents. However, due to budget constraints, the survey sample was drawn from Viti Levu only, excluding Vanua Levu and the outer islands.

The survey sample consists of 13 urban and 21 rural enumeration areas, scattered across Viti Levu. They cover Suva; the 5 major towns in both provinces (Nausori, Lautoka, Nadi, Ba, and Sigatoka); 9 villages; and 12 settlements. A total of 420 households were interviewed, with only 2 refusing to answer the questionnaire, which left 418 households in our sample (details in Annex C).

The Tonga Sample

The Kingdom of Tonga encompasses 171 islands, of which around 40 are populated. Out of the 100,000 Tongan residents, only 25 percent live in the outer islands, with the large majority of the
population living in the main island of Tongatapu and mostly concentrated in the capital, Nuku’afofa. The capital city is home to around 50 percent of the people.

This population split is reflected in the survey sample, which was selected directly by the Department of Statistics in Nuku’afofa. The primary sampling units consist of 20 enumeration areas covering both the urban and rural population. In total, the Tonga sample consists of 500 households drawn from Nuku’afofa and 4 districts of rural Tongatapu; the remaining 125 households were chosen from 2 groups of outer islands, Vava’u and Hapa’i.

Sample Characteristics

As seen in Table 3.1, the survey sample reflects the almost even urban-rural split of the population in Tonga and the main island of Fiji, Viti Levu, as well as the ethnic distribution in the latter with 50.5 percent of the Fiji sample being Indo-Fijian, 47.1 percent Indigenous-Fijian (abbreviated to Indig-Fijian in all tables) and the remaining 2.4 percent constituting other ethnic groups.3

Table 3.1: Composition of Household Sample

<table>
<thead>
<tr>
<th></th>
<th>Fiji</th>
<th></th>
<th>Toledo</th>
<th></th>
<th>Total</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>#</td>
<td>%</td>
<td>#</td>
<td>%</td>
<td>#</td>
<td>%</td>
</tr>
<tr>
<td>Urban</td>
<td>208</td>
<td>49.76</td>
<td>250</td>
<td>50.00</td>
<td>458</td>
<td>49.89</td>
</tr>
<tr>
<td>Rural</td>
<td>210</td>
<td>50.24</td>
<td>250</td>
<td>50.00</td>
<td>460</td>
<td>50.11</td>
</tr>
<tr>
<td>Total</td>
<td>418</td>
<td>100.00</td>
<td>500</td>
<td>100.00</td>
<td>918</td>
<td>100.00</td>
</tr>
</tbody>
</table>

Fiji by Ethnic Group

<table>
<thead>
<tr>
<th></th>
<th>Indo-Fijian</th>
<th>Indigenous-Fijian</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>#</td>
<td>%</td>
</tr>
<tr>
<td>Urban</td>
<td>107</td>
<td>54.31</td>
</tr>
<tr>
<td>Rural</td>
<td>90</td>
<td>45.69</td>
</tr>
<tr>
<td>Total</td>
<td>197</td>
<td>100.00</td>
</tr>
</tbody>
</table>

Migrant Households in Fiji and Tonga

In this section, a number of selected demographic characteristics of the sampled households and migrant members are presented and discussed briefly. The purpose of these data is to provide a descriptive context in which the later analytical work was based. More specifically, the aim is to address a number of prior questions regarding characteristics of migrant and non-migrant households, recipients and non-recipients of remittances, magnitudes, and forms and channels of remittances. The more analytical questions concerning the impacts of migration and remittances on household income, saving, education, and welfare are addressed in the subsequent sections. The descriptive data discussed in this section are also presented within a comparative framework allowing for possible differences in the selected characteristics to be identified between the Tonga and Fiji samples, as well as between the two main ethnic groups within Fiji where migration has been motivated by different factors. Such differences between the samples and sub-samples are discussed, where appropriate, in relation to their potential relevance in the analytical sections that follow.

Incidence of Migrant Households

When embarking upon this study, it was expected that the incidence of migrant households in Fiji
would be very low, possibly requiring an over-sampling of migrant households to establish a sufficiently large sample of remittance-receiving households. However, when standard sampling procedures were followed (see Annex C for details), it was found that over-sampling would not be necessary. As Table 3.2 shows, although a much higher proportion of Tongan households had at least one migrant member currently abroad (58 percent), as expected, the proportion of Fijian households with a migrant was much higher than expected (35 percent). As expected, among Fijian households this proportion was much higher among Indo-Fijians (43 percent) than Indigenous-Fijians (26 percent), most likely reflecting the economically and politically induced, post-coup migration of a high proportion of Indo-Fijians referred to previously in this study.

Table 3.2 also indicates a reasonably similar incidence of migrant households across all household sizes in both countries. It should be noted that as the sub-sample sizes become rather small when disaggregated by ethnicity, the observed high incidence (70 percent) among large, Indo-Fijian households needs to be treated with due caution.

The higher incidence of migrant households in Tonga and among Indo-Fijians in Fiji is also reflected by the data on the average number of members living overseas per migrant household, shown in Table 3.2. Tongan households have an average of 2.4 members living abroad, in comparison with 1.8 in Fiji. Likewise, Indo-Fijian migrant households had on average 2.0 migrants in comparison with 1.5 in Indigenous-Fijian households.4

<table>
<thead>
<tr>
<th>Table 3.2: Households with at Least one Migrant by Household Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>Household size</td>
</tr>
<tr>
<td>----------------</td>
</tr>
<tr>
<td><strong>By country</strong></td>
</tr>
<tr>
<td>Fiji</td>
</tr>
<tr>
<td>n =</td>
</tr>
<tr>
<td>% with migrant(s)</td>
</tr>
<tr>
<td>Ave. no. migrants*</td>
</tr>
<tr>
<td>Tonga</td>
</tr>
<tr>
<td>n =</td>
</tr>
<tr>
<td>% with migrant(s)</td>
</tr>
<tr>
<td>Ave. no. migrants*</td>
</tr>
<tr>
<td><strong>Fiji by Ethnic Group</strong></td>
</tr>
<tr>
<td>Indo-Fijian</td>
</tr>
<tr>
<td>n =</td>
</tr>
<tr>
<td>% with migrant(s)</td>
</tr>
<tr>
<td>Ave. no. migrants*</td>
</tr>
<tr>
<td>Indigenous-Fijian</td>
</tr>
<tr>
<td>n =</td>
</tr>
<tr>
<td>% with migrant(s)</td>
</tr>
<tr>
<td>Ave. no. migrants*</td>
</tr>
</tbody>
</table>

* Mean number for households with at least one migrant.
Incidence of Return-migrants and Intentions to Migrate

Previous studies have found return-migration and intention to migrate to be important determinants of remittances propensities (Ahlburg and Brown, 1998). Table 3.3 provides some information about the numbers of current migrants and presence of return-migrants and migration intentions of household members.

Table 3.3: Numbers of Migrants in Household, Intentions to Migrate, and Return-Migrants

<table>
<thead>
<tr>
<th></th>
<th>Number of</th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>migrants/</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>&gt;2</td>
</tr>
<tr>
<td></td>
<td>household</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>n = number of households</td>
<td>Fiji n</td>
<td>274</td>
<td>75</td>
<td>36</td>
<td>33</td>
</tr>
<tr>
<td>(% of all households)</td>
<td>(%</td>
<td>(65.55)</td>
<td>(17.94)</td>
<td>(8.61)</td>
<td>(7.89)</td>
</tr>
<tr>
<td></td>
<td>Fiji</td>
<td>209</td>
<td>95</td>
<td>76</td>
<td>120</td>
</tr>
<tr>
<td></td>
<td>(%</td>
<td>(41.80)</td>
<td>(19.00)</td>
<td>(15.20)</td>
<td>(24.00)</td>
</tr>
<tr>
<td>Intention to migrate (%)</td>
<td>Fiji</td>
<td>62.77</td>
<td>60.00</td>
<td>77.78</td>
<td>84.85</td>
</tr>
<tr>
<td>Presence return-migrant (%)</td>
<td>Fiji</td>
<td>37.32</td>
<td>43.16</td>
<td>47.37</td>
<td>53.33</td>
</tr>
<tr>
<td></td>
<td>Tonga</td>
<td>5.47</td>
<td>4.00</td>
<td>11.11</td>
<td>12.12</td>
</tr>
<tr>
<td></td>
<td>Tonga</td>
<td>10.53</td>
<td>10.53</td>
<td>13.16</td>
<td>21.67</td>
</tr>
</tbody>
</table>

From Table 3.3 the migration-orientation of Tongan households is noted. Apart from a much higher proportion of Tongan households having at least one migrant, it is worth noting also that only 16 percent of Fijian households have two or more migrant members in comparison with 39 percent of Tongan households. There appears to be a positive association between the numbers of migrants in the household and the presence of a household member who is intending to migrate in the near future. This could be explained in a number of ways. For instance, if migration opportunities are a function of a particular set of characteristics and if household members share a common set of characteristics, then it is possible that more household members who have succeeded in becoming migrants, the higher is the perceived likelihood of other household members also becoming migrants. Alternatively, since networking and chain-migration effects are important, having more family members within a migration network increases the possibilities for other family members to join them abroad. When modelling the migration and remittances behaviour of households (Section 3.3), the presence of such effects is taken into account.

It also needs to be noted that among households in Fiji there is a much larger proportion (66.8 percent compared with 43.8 percent in Tonga) where at least one member is intending to migrate in the near future (Table 3.3). This larger proportion of individuals with migration intentions in Fiji is most likely explained by the sizeable proportion of Tongans who have already migrated. However, further econometric analysis would be required to establish whether the effect of the diaspora on the migration intentions is mainly due to an already widespread access to remittances, which weakens the strength of the ‘push-factors’, or to a smaller proportion of the remaining population with the required skills to migrate and so with lower migration intentions.

As the last row of Table 3.3 shows, the presence of a return-migrant in the household is positively associated with the number of present migrants, this may be also suggesting that perhaps earlier migration has supported—financially—investment in other household members’ migration. Previous studies have found that migrants who intend to return home tend to remit more and accumulate more assets in their country of origin (Ahlburg and Brown, 1998). They can also provide the liquidity necessary to fund the education and migration of the next generation within the family. It is therefore

49
to be expected that the presence of a return-migrant in a household will both increase the probability of other household members becoming migrants and increase the incentives and obligations for them to remit. However, it also interesting that such a low proportion of households have a return migrant, especially in Tonga (13.6 percent), considering that almost 60 percent of households currently have a migrant abroad. This reinforces the point raised in Section 3.2 that international migration in the context of the Pacific islands has become more permanent settler-migration (even though this may not have been the original intentions of departing migrants).

Individual Migrants

As previously discussed, the questionnaire collected a limited amount of information about individual migrants living overseas from the interviewed household head.

The Sample

The collected information is summarised in the following tables and figures. Table 3.4 shows that from the 918 sampled households there were 964 migrants in total, 700 from Tonga and 264 from Fiji.

<table>
<thead>
<tr>
<th>Ethnic group</th>
<th>Total migrants</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indo-Fijian</td>
<td>174</td>
<td>18.05</td>
</tr>
<tr>
<td>Indigenous-Fijian</td>
<td>83</td>
<td>8.61</td>
</tr>
<tr>
<td>Other Fijian</td>
<td>7</td>
<td>0.73</td>
</tr>
<tr>
<td>Tongan</td>
<td>700</td>
<td>72.61</td>
</tr>
<tr>
<td>Total</td>
<td>964</td>
<td>100.00</td>
</tr>
</tbody>
</table>

Given the earlier observation that in comparison with Indigenous-Fijian households a higher proportion of Indo-Fijian households had at least one migrant and on average a larger number of migrants per migrant household, it is not surprising that there were more than double the number of Indo-Fijian migrants (174) than Indigenous-Fijian migrants (83) in our sample, even though there was a similar number of households in each sub-sample.

Destination Countries of Migrants

As there are differences in employment and earning opportunities for migrants in different destination countries, it is also important to account for destination country in the analysis of remittances. The distribution of migrants by destination country is shown in Figure 3.1.
If Australia and New Zealand are grouped together, these countries account for the destination of a similar proportion (over 60 percent) of Tongan and Fijian migrants, although a relatively larger proportion of Tongans were in New Zealand, and migrants from Fiji in Australia. A much larger proportion of Tongan migrants are found to be in the United States (31.8 percent) compared with 17.5 percent from Fiji, while 20.2 percent of Fijian migrants are in ‘other’ countries compared with only 4.7 percent from Tonga. It is believed that among ‘other’ countries, the Gulf States account for a significant number, but this cannot be verified from the survey data.

Again, some important differences are found within the Fiji sample. While there was a similar proportion from each sub-sample in Australia and New Zealand, there were relatively more Indo-Fijians in New Zealand (28.2 percent compared with 13.3 percent of Indigenous-Fijians) and relatively more Indigenous-Fijians in Australia (50.6 percent) compared with 34.5 percent of Indo-Fijians. Among Indo-Fijians, a much larger proportion resides in the United States (21.4 percent compared with 9.6 percent of Indigenous-Fijians) while a much larger proportion of Indigenous-Fijians were in ‘other’ (including Gulf States) countries.

It is also worth noting some differences in the destination countries of recent migrants (i.e., those who had been away less than two years). With the recent Tongan migrants, the distribution by country of destination is similar to the total sample of migrants, but among the Fijian migrants there has been a noticeable shift towards the ‘other’ countries to which over 40 percent of recent migrants had moved. Furthermore, 85.7 percent (12 out of 14) of recent migrants in ‘other’ countries were Indigenous-Fijians, emphasising the situation where a growing number of Indigenous-Fijians are now migrating to the Gulf. Given the different skill requirements of occupations in these destinations and the often, temporary, shorter-term nature of the contracts, such differences need to be considered in interpreting the results from any econometric analysis of remittances to Fiji.

**Education Levels of Migrants**

As seen in Table 3.5, there are some important differences in educational attainment of migrants from Fiji and Tonga. While for both groups only a very small proportion (2 percent or less) have only some primary education or less, a much larger proportion of Fijian migrants (36 percent) have post-secondary education compared with only 14 percent of Tongans. However, when the Fiji sample is
disaggregated by major ethnic group, it is apparent that it is primarily Indo-Fijian migrants who account for this difference, with 45.4 percent having post-secondary qualifications in comparison with only 13 percent of Indigenous-Fijians. Indeed, the educational profile of Indigenous-Fijian migrants is much closer to that of Tongan migrants. These differences reinforce what was suggested in Section 3.2 regarding Indo-Fijian migration being more longer-term emigration, where holding tertiary qualifications is perceived as significantly increasing prospects for permanent emigration.

Table 3.5: Education of Migrants

<table>
<thead>
<tr>
<th>Sample</th>
<th>No schooling</th>
<th>Some primary</th>
<th>Some secondary</th>
<th>Post-secondary</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fiji</td>
<td>95</td>
<td>97</td>
<td>79</td>
<td>174</td>
<td></td>
</tr>
<tr>
<td>(% of sample)</td>
<td>(35.98)</td>
<td>(13.86)</td>
<td>(45.40)</td>
<td>(100)</td>
<td></td>
</tr>
<tr>
<td>Tonga</td>
<td>3</td>
<td>12</td>
<td>591</td>
<td>700</td>
<td></td>
</tr>
<tr>
<td>(% of sample)</td>
<td>(1.14)</td>
<td>(1.71)</td>
<td>(84.43)</td>
<td>(100)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Fiji by Ethnic Group</th>
<th>No schooling</th>
<th>Some primary</th>
<th>Some secondary</th>
<th>Post-secondary</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indo-Fijian</td>
<td>3</td>
<td>3</td>
<td>89</td>
<td>79</td>
<td>174</td>
</tr>
<tr>
<td>(% of sample)</td>
<td>(1.72)</td>
<td>(1.72)</td>
<td>(51.15)</td>
<td>(45.40)</td>
<td>(100)</td>
</tr>
<tr>
<td>Indigenous-Fijian</td>
<td>0</td>
<td>0</td>
<td>72</td>
<td>11</td>
<td>83</td>
</tr>
<tr>
<td>(% of sample)</td>
<td>(0.00)</td>
<td>(0.00)</td>
<td>(86.75)</td>
<td>(13.25)</td>
<td>(100)</td>
</tr>
</tbody>
</table>

Therefore, these data suggest that there might be stronger self-selectivity among Indo-Fijian migrants, at least in relation to observable educational attainment levels. This could be either if they choose to migrate because of better earnings possibilities abroad or due to discrimination in the domestic labour market.

Remitting Migrants

There is concern that, if migrants remit only to their parents, once the parents are deceased or have joined their offspring abroad, remittance levels will decay. Previous studies of Samoan and Tongan migrants found this not to be the case, as migrants remit also to their siblings and sometimes to the next generation of nieces, nephews, etc. (Brown, 1997; 1998a; Brown and Poirine, 2005). The data in Figure 3.2 show the relationship of the remitting migrant to the household heads interviewed in Fiji and Tonga. It is evident that a significant number of remitting-migrants are not necessarily close relatives of the recipient household’s head. It is also clear that a much higher proportion of Tongan remitters are the children of the household heads (59 percent in comparison with 27 percent of Fijian households). What is also striking is that 43 percent of Fiji’s remitters are not ‘immediate relatives’ of the household head, compared with only 15 percent of Tongan migrants. A possible explanation for this is differences between the samples in definition of immediate family. For instance, a son-in-law might more likely be treated as family (i.e., as ‘Child’ in Figure 3.2) by a head of household in Tonga than in Fiji. This difference is also consistent with the perception of the Tongan diaspora and remittance-dependence being on such a scale that remittances have become, in effect, an informal, family-based pension scheme (Brown and Poirine, 2005). It is also from this perspective that remittances can be conceptualised as the households’ return on past human capital invested in the upbringing, education, and migration of their offspring. It is therefore also to be expected that in Tonga income from remittances is much more likely to be used as consumption support than for saving and investment in the same way as formal pension or superannuation funds would be used in developed economies.
In Fiji, on the other hand, where remittances are a relatively recent phenomenon, it would not appear that they are performing the same role, with a much larger proportion being sent to households outside the migrants' immediate family. However, disaggregation of the Fiji sample by major ethnic group indicates some important differences. Almost two-thirds of remitting Indo-Fijian migrants are the children or siblings of the receiving household head, suggesting that for this group remittances are to a greater extent performing a role as an informal pension scheme; while in the case of Indigenous-Fijians, only one-third are children or siblings. Remarkably, 58 percent of remitting Indigenous-Fijians are not immediate relatives of the household head. Without further data collected from the migrants themselves in their host countries, it is not possible to shed further light on the reasons for these differences.

Questions about Remittances

In this section a number of preliminary questions are addressed by way of presentation and discussion of descriptive tables and charts compiled from the survey prior to presentation of the results from the more formal multivariate analysis in Section 3.3. More specifically the survey data are presented in relation to the following questions regarding the recipient households:

- Which households receive remittances: only those which have migrant members abroad? How much do they receive, and in what form and through which channels?
- Are wealthier households more likely to have migrants and to receive remittances, and/or do they receive higher levels of remittances?
- Does the number of migrants in the household affect the aggregate level of remittances sent to the household?

From the limited information that could be gathered about the characteristics of individual migrants, it is further asked:

- Is it the case that female migrants are more generous than males, and does the migrant’s level of education affect the level of remittances sent?

In this study remittances are defined as and broken down into (a) cash transfers through banks and other financial institutions, or hand-carried; (b) transfers in kind; and (c) payments made by migrants
on behalf of households. The relevant time period specified in the questionnaire was the calendar year 2004.

Who Receives Remittances—Migrant vs. Non-migrant Households?

Figure 3.3 shows which households had received remittances in one form or another over the preceding year. The sample is split between those households with at least one migrant and those without any migrant members. As expected, most households with a migrant member received remittances—86.8 percent in Fiji and 97.6 percent in Tonga. Although the high incidence of remitting migrants was to be expected from previous knowledge about remittances and migration networks in the Region, what was not expected was the high proportion of households without any migrants who were also in receipt of remittances.

In Tonga, where (as noted throughout this study) migration- and remittances-dependency have been long established and have become almost ubiquitous, nearly 80 percent of non-migrant households had received remittances in 2004. In Fiji, the less mature migration-and-remittances economy, almost 20 percent of households without migrants had received remittances. Of the total sample, 90.9 percent of Tongan and 42.0 percent of Fijian households received remittances.5

Figure 3.3: Households Receiving Remittances
Within the two main ethnic groups in Fiji, a similar proportion of migrant households received remittances—84.7 percent among Indo-Fijians and 89.1 percent among Indigenous-Fijians. However, a somewhat larger proportion of Indo-Fijian households without a migrant (26.8 percent) received remittances in comparison with 14.7 percent of Indigenous-Fijians.

These observations are important for they suggest that as migration and remittances become more commonplace in an economy, non-migrant households can benefit more from direct access to remittances. This points to a more nuanced view on the relationship among migration, remittances, and household living standards, and inequality in these societies, than what is generally argued in most other studies of migration and remittances where it is normally assumed that it is only the immediate family members of the migrant who stand to benefit, at least directly, from the flows of remittances. It is for this reason that, in the remainder of this section, a number of key variables are examined on the basis of whether the household was a recipient of remittances or not, rather than whether it had a migrant member or not. In the econometric analysis that follows in Section 3.3, the interrelationships between presence of migrants, remittances, and income are modelled within a unified framework that allows for interrelationships between the three variables.

What levels of remittances are received?

Figure 3.4 shows the mean levels of remittances received by remittance-receiving households. Tongan households received, on average, about 250 percent more (US$3,067) than Fijian households (US$1,328), and households with migrants received about 250 percent more than households without migrants. This can be explained largely by there being more migrants per household in Tonga as noted earlier; and non-migrant, remittance-receiving households in Tonga receive considerably more on average than those in Fiji.

Figure 3.4: Mean Levels of Remittances Received by Remittance-Receiving Households
Figure 3.4 also shows that although a higher proportion of Indo-Fijian households received remittances, Indigenous-Fijian households received more than double the mean level of remittances received by Indo-Fijians. In households without migrants, it was three times as much. This probably reflects the common perception of more permanent, family-based emigration of Indo-Fijians as opposed to more short-term, temporary migration among Indigenous-Fijians, especially the more recent wave of migrants to the Gulf as discussed in Section 3.2. These differences between Tonga and Fiji are even greater when these means are recalculated across all households in the sample. For example, households in Tonga without a migrant receive almost 10 times the level of remittances of their counterparts in Fiji.

In What Forms are Remittances Received?

As noted, remittances are defined as including cash transfers (through formal financial channels and informal channels), households’ bills paid by the migrant to third parties, and in-kind transfers. Table 3.6 shows the composition of remittances for the Fiji and Tonga samples. In both cases, as one would expect, cash remittances account for the largest proportion of total remittances (74.3 percent for Fijian households and 79.8 percent for Tongans). For Tongans, bills paid on behalf of households by migrants are a small part of the total, accounting for only 1.5 percent of total remittances, in comparison with 10.4 percent in the case of Fijian households. In-kind transfers are of a similar proportion in both samples (15.3 percent for Fijian households and 18.7 percent for Tongans).

<table>
<thead>
<tr>
<th>Table 3.6: Composition of Remittances Received (2004 US$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cash</td>
</tr>
<tr>
<td>------------</td>
</tr>
<tr>
<td><strong>Fiji</strong></td>
</tr>
<tr>
<td>(n = 2,003.95)</td>
</tr>
<tr>
<td>(% of sample)</td>
</tr>
<tr>
<td><strong>Tonga</strong></td>
</tr>
<tr>
<td>(n = 2,447.58)</td>
</tr>
<tr>
<td>(% of sample)</td>
</tr>
<tr>
<td><strong>Total</strong></td>
</tr>
<tr>
<td>(n = 2,003.95)</td>
</tr>
<tr>
<td>(% of sample)</td>
</tr>
</tbody>
</table>

What Remittance Channels are Used?

Previous studies found that Pacific island migrants use a wide range of channels for transferring remittances, formal and informal (Brown, 1995). It has also been found in other studies that there are significant cost differences between channels, and that the amount of remittances sent can be sensitive to the cost of sending (Gibson, McKenzie and Rohorua, 2006). From a policy perspective, the channel used can also be important if this also affects the flow of funds through the formal financial institutions and hence the capacity of banks and other financial institutions, including micro-credit institutions, to lend for investment. Households were asked to indicate through which channels they had received remittances in the previous year, as well as the most frequently used channel. Tables 3.7 and 3.8 show All Channels and Most Frequent channel used. In both countries, formal channels were the most commonly used, but it is interesting to note that in Fiji almost 15 percent of households indicated that informal channels were the most frequently used in comparison with less than 3 percent in the case of Tongans; although, over 40 percent of Tongans had made use of informal channels. This indicated that most households use a combination of formal and informal channels.
Table 3.7: Channels Used for Cash Remittances (% of receiving households)

<table>
<thead>
<tr>
<th></th>
<th>Formal</th>
<th>Informal</th>
<th>Not specified</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>All channels</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fiji</td>
<td>83.08</td>
<td>33.08</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tonga</td>
<td>98.39</td>
<td>41.24</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Most frequent</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fiji</td>
<td>82.31</td>
<td>14.62</td>
<td>3.07</td>
<td>100.00</td>
</tr>
<tr>
<td>Tonga</td>
<td>96.77</td>
<td>2.76</td>
<td>0.47</td>
<td>100.00</td>
</tr>
</tbody>
</table>

*As more than one response possible total exceeds 100%.

Table 3.8: Channels Used for Cash Remittances (% of receiving households)

<table>
<thead>
<tr>
<th></th>
<th>Bank</th>
<th>Other financial</th>
<th>ATM</th>
<th>Carried by</th>
<th>Carried by</th>
<th>Visit to</th>
<th>Mail</th>
<th>Shop</th>
<th>Other</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>All channels</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fiji</td>
<td>38.46</td>
<td>50.00</td>
<td>0.77</td>
<td>22.31</td>
<td>12.31</td>
<td>0.77</td>
<td>21.54</td>
<td>0.00</td>
<td>0.77</td>
<td></td>
</tr>
<tr>
<td>Tonga</td>
<td>57.83</td>
<td>68.89</td>
<td>4.38</td>
<td>15.21</td>
<td>17.05</td>
<td>5.30</td>
<td>19.82</td>
<td>8.99</td>
<td>3.23</td>
<td></td>
</tr>
<tr>
<td><strong>Most frequent</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fiji</td>
<td>21.43</td>
<td>48.41</td>
<td>0.00</td>
<td>7.14</td>
<td>7.14</td>
<td>0.79</td>
<td>15.08</td>
<td>0.00</td>
<td>0.00</td>
<td>100</td>
</tr>
<tr>
<td>Tonga</td>
<td>31.25</td>
<td>64.35</td>
<td>0.93</td>
<td>0.93</td>
<td>0.23</td>
<td>0.69</td>
<td>0.69</td>
<td>0.93</td>
<td>0.00</td>
<td>100</td>
</tr>
</tbody>
</table>

*As more than one response possible total exceeds 100%.

The most commonly used channel was other (non-bank) financial institutions (such as Western Union) which was used by 50 percent of Fijian households and 68.9 percent of Tongan households, and the most frequently used for 48 percent of Fijian households and 64.4 percent of Tongan households. This finding is quite significant given the relatively recent introduction of other financial institutions, such as Western Union, into the Pacific islands. Banks were used by 38.5 percent of Fijian and 57.8 percent of Tongan households but were the most frequently used channel for only 21.4 percent of Fijian and 31.3 percent of Tongan households. The ATMs offer one of the least cost channels for transferring cash (Gibson et al., 2006), but it is interesting to note that this channel was used by few households—4.45 percent of Tongan and 0.8 percent of Fijian households—most probably reflecting in both countries the limited availability and location of ATMs almost exclusively in the capital cities.

**Are Remittance Levels Related to Household Income and Assets Ownership?**

As the focus of this study is very much on the implications of remittances for household income and welfare, it is useful to examine the relationship between household-income level and the presence of a migrant. It is sometimes argued that to migrate, the individual needs to come from a relatively wealthy household—the notion of the so-called ‘migration-hump’. However, caution needs to be exercised when examining the relationship between income and/or wealth and migration. It cannot be concluded whether the direction of causality is from income/wealth to migration, with mostly wealthy households being able to migrate as posited by the migration-hump thesis; or whether it is migration that leads to higher income and wealth, either directly where migrants’ remittances supplement household income (insurance) or indirectly where remittances remove credit constraints to household investment (Ozden and Schiff, 2006; World Bank, 2006). In this section some descriptive data are presented on the relationship between income level on the one hand and presence of a migrant and levels of remittances on the other. These interrelationships between migration, remittances, and income are then examined more rigorously in Section 3.3 using appropriate econometric models with appropriate controls for reverse causality.
Figure 3.5 shows a disaggregation of the sample into per capita income quintiles, where income is measured exclusive of remittances. This indicates that in the migration-mature economy of Tonga the incidence of a migrant household is relatively even across all income groups, although it is highest among the highest-income quintile. In the Fiji sample on the other hand, there is a much higher proportion of households with at least one migrant in the higher (4th and 5th) quintiles suggesting some evidence that the migration-hump thesis could apply to Fiji but not to migration-remittance dependent Tonga. However, when the Fiji sample is disaggregated by main ethnic group, there is no indication of a migration-hump for either group, nor any other apparent systematic relationship between income and incidence of migrant-households. These possible relationships are explored further in the econometric analysis in Section 3.3. Moreover, it also needs to be noted that migration is, in general, not necessarily short-lived considering the average length of migrants’ absence overseas (which in this study is 10.4 years among Tongan migrants and 9.3 years in the Fiji sample). Thus, the initial migration decision could be determined by income; but with longer period of absence, the household could become increasingly well-off with the inflows of remittances as a supplement to domestic income sources.

**Figure 3.5: Disaggregation of Sample in Per Capita Income Quintiles**

![Graph showing disaggregation of sample in per capita income quintiles for Fiji and Tonga.](image)

The survey also gathered information on household assets from which estimates of total household wealth were calculated. Table 3.9 shows the incidence of migrant households by households’ value of non-land assets held in 2004. From this it can be seen that in both countries the very poorest households with non-land assets less than USS4,000 are least likely to have a migrant member abroad. This suggests some support for the migration-hump hypothesis; although in Fiji, it is also true that the wealthiest households (with non-land assets over USS20,000) are much more likely to have a migrant member. In Tonga, where migration is far more widespread, once a household’s wealth is above a certain relatively low threshold level the probability of having a migrant does not appear to increase significantly.
Table 3.9: Presence of One or More Migrants by Household Value of Non-land Assets

<table>
<thead>
<tr>
<th>Value of household non-land assets</th>
<th>&lt;$4,000</th>
<th>$4-8,000</th>
<th>$8-12,000</th>
<th>$12-16,000</th>
<th>$16-20,000</th>
<th>&gt;$20,000</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fiji</td>
<td>127</td>
<td>55</td>
<td>29</td>
<td>32</td>
<td>25</td>
<td>149</td>
<td>417</td>
</tr>
<tr>
<td>Tonga</td>
<td>117</td>
<td>89</td>
<td>72</td>
<td>43</td>
<td>55</td>
<td>124</td>
<td>500</td>
</tr>
<tr>
<td>Fiji</td>
<td>(20.47)</td>
<td>(38.18)</td>
<td>(27.59)</td>
<td>(28.13)</td>
<td>(28.00)</td>
<td>(48.99)</td>
<td>(34.53)</td>
</tr>
<tr>
<td>Tonga</td>
<td>(33.33)</td>
<td>(55.06)</td>
<td>(61.11)</td>
<td>(74.42)</td>
<td>(67.27)</td>
<td>(72.58)</td>
<td>(58.20)</td>
</tr>
</tbody>
</table>

(Amounts in 2004 USD); n= total number of households; % = households with migrant(s)

As previously mentioned, the direction of causality between wealth, income, and migration is not necessarily unidirectional; thus in the econometric analysis, this relationship is explored further. With this caveat in mind, the upper panel of Figure 3.6 shows that in Tonga the percentage of households receiving remittances was similar for all income groups. However, for Fijian households, a larger proportion in the 4th and 5th income quintiles received remittances.

Figure 3.6: Households Receiving Remittances

<table>
<thead>
<tr>
<th>% of Households Receiving Remittances by Per Capita Income Quintile</th>
<th>Fiji % of Households Receiving Remittances by Quintile and Ethnicity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Per Capita Income Quintile</td>
<td>Per Capita Income Quintile</td>
</tr>
<tr>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>20%</td>
<td>10%</td>
</tr>
<tr>
<td>40%</td>
<td>30%</td>
</tr>
<tr>
<td>60%</td>
<td>40%</td>
</tr>
<tr>
<td>80%</td>
<td>50%</td>
</tr>
<tr>
<td>100%</td>
<td>60%</td>
</tr>
</tbody>
</table>

- Fiji
- Tonga

Mean Remittances of Receiving Households, by Quintile

<table>
<thead>
<tr>
<th>Mean Remittances of Receiving Households, by Quintile</th>
</tr>
</thead>
<tbody>
<tr>
<td>Per Capita Income Quintile</td>
</tr>
<tr>
<td>0 $</td>
</tr>
<tr>
<td>2000 $</td>
</tr>
<tr>
<td>4000 $</td>
</tr>
</tbody>
</table>

- Tonga
- Fiji

Fiji Mean Remittances of Receiving Households, by Quintile

<table>
<thead>
<tr>
<th>Fiji Mean Remittances of Receiving Households, by Quintile</th>
</tr>
</thead>
<tbody>
<tr>
<td>Per Capita Income Quintile</td>
</tr>
<tr>
<td>0 $</td>
</tr>
<tr>
<td>2000 $</td>
</tr>
<tr>
<td>4000 $</td>
</tr>
</tbody>
</table>

- Indigenous-Fijian
- Indo-Fijian
The lower panels of Figure 3.6 show the mean level of remittances (among remittance-receiving households) by per capita income quintile. What is most striking is that in both countries the mean level of remittances received by the poorest households (1st quintile) is higher than the mean for the sample as a whole; in the case of Fiji, it is higher than the mean for all other quintiles. For Tonga, it is higher than all other quintiles with the exception of the highest-income quintile for which the mean was only slightly higher.

As noted above, the mean level of remittances received was considerably higher for Tongan households (US$2,729.6) than Fijian households (US$554.1). To some extent this difference can be explained by the much higher proportion of Tongan households receiving remittances. But, when the means are re-calculated on a per remittance-receiving household basis (Figure 3.6), it can be seen that the Tongan mean (US$3,067) is still about 250 percent higher than the mean for Fijian (US$1,328), reflecting to a large extent the higher mean number of remitting migrants per Tongan household.

The disaggregation of the Fiji sample by ethnicity (right hand panels of Figure 3.6) indicates that across all quintiles a higher proportion of Indo-Fijian households received remittances. However, it is clear that the mean level of remittances received (by remittance-receiving households) was considerably higher among Indigenous-Fijians. Across all income groups, the mean was more than double for Indigenous-Fijians (US$1,829) in comparison with Indo-Fijians (US$815).

These findings might suggest that remittances could play an important distributional function, reducing rather than exacerbating income inequalities. The impact of remittances on income distribution and poverty is examined in some detail in Section 3.5 using appropriate statistical techniques.

**Does the Number of Migrants Affect a Household’s Level of Remittances?**

It was noted that the average number of migrants in households varied quite considerably between the samples, and across income groups and, in Fiji’s case, ethnic groups within the samples. If remittances are determined more by factors on the supply side, such as migrants’ income level, it is likely that the number of migrants in a household will have a positive effect on how much the household receives. On the other hand, if remittances are more demand driven, such as the recipient family’s need, it is possible that total remittances will not vary with the number of migrants in the family. Mean levels of remittances received by numbers of migrant members are shown in Figure 3.7.

*Figure 3.7: Mean Levels of Remittances*
This shows a clear, positive relationship in the Tonga sample, suggesting that the level of remittances received by a household is supply driven (i.e., the level received is determined by the number of migrants abroad), although it is clearly not linear. With only one migrant member, the mean level is US$3,274, rising to US$3,723 with two migrants, and to US$4,527 with three or more migrants. For the Fiji sample, the mean level increases from US$1,358 with one migrant to US$1,889 with two. With three or more migrants, there is little difference.

The right-hand panel of Figure 3.7 shows the same data for the two main ethnic groups in Fiji. There appears to be a large difference between the two. In the case of Indo-Fijians, two important observations can be made. First, there is little difference in the mean-level remittances received by households with one migrant compared with households having no migrants. Second, when the number of migrants increases above two, the mean level of remittances received decreases. These data suggest that the level of remittances received by Indo-Fijian households are not only much lower than those received by Indigenous-Fijians, but are more likely to be demand determined in the sense that the number of migrants abroad does not seem to influence the level of remittances the household receives. In contrast, among Indigenous-Fijian households there appears to be a clear, positive, and almost linear relationship between number of migrants and the mean level of remittances, suggesting a strong supply-driven relationship. These possible differences between the samples and sub-samples in the determinants of remittances levels are investigated further in the econometric analysis in Section 3.3.

Are Some Migrants More Generous than Others by Virtue of Gender and Education?

As indicated, a limited amount of information about the migrants’ characteristics was obtained from the surveyed household heads in the remittance-receiving countries. In this section, some migrant-specific characteristics are discussed. Previous studies have found the gender of the remitting migrant to be an important determinant of remittance propensities and levels (De La Briere et al, 2002; and, in the South Pacific context, James, 1997). Table 3.10 shows mean remittance levels per remitting migrant by gender, ignoring all other characteristics, such as age and education. It shows that in both samples the migrant members are divided evenly between the two genders. In Fiji, the mean level of remittances per migrant is much higher among male migrants in comparison with females, while among Tongan migrants the mean levels are higher and the gender difference is relatively small.

<table>
<thead>
<tr>
<th>Table 3.10: Gender of Migrant and Remittances Received</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
<tr>
<td>By country</td>
</tr>
<tr>
<td>Fiji (n = 264)</td>
</tr>
<tr>
<td>Tonga (n = 695)</td>
</tr>
<tr>
<td>Remittances/remitter</td>
</tr>
<tr>
<td>Fiji (n = 176)</td>
</tr>
<tr>
<td>Tonga (n = 606)</td>
</tr>
<tr>
<td>Fiji migrants by ethnic</td>
</tr>
<tr>
<td>Indo-Fijian (n = 174)</td>
</tr>
<tr>
<td>Indigenous-Fijian (n = 83)</td>
</tr>
<tr>
<td>Remittances/remitter</td>
</tr>
<tr>
<td>Indo-Fijian (n = 108)</td>
</tr>
<tr>
<td>Indigenous-Fijian (n = 66)</td>
</tr>
</tbody>
</table>

61
Again, the differences within the Fiji sample appear greater than the differences between it and the Tonga sample. The mean for male Indigenous-Fijians is almost 250 percent higher than it is for females and is higher than the mean for Tongan males, even though the mean for Tongans as a whole is almost double that for Fijian migrants as a whole. This finding is consistent with the earlier observation that a large proportion of recent Fijian male migrants have moved to highly paid, semi-skilled jobs in the Gulf States, most often on a temporary basis and without their families. This would account for their considerably higher remittance propensities. This hypothesis is supported by the observation that over 80 percent of Indigenous-Fijian migrants who departed within the last two years were male, compared with 42 percent for all Indigenous-Fijian migrants.

It was shown above in this section that there were some important differences in education levels between Tongan and Fijian migrants and between the main ethnic groups in Fiji. If income and educational attainment are positively related and if income of the migrant influences remittances, one would expect to observe large differences in remittance levels depending on education. Table 3.11 shows mean remittances by migrants’ education level for the two samples and the two main ethnic groups in Fiji.

Table 3.11: Mean Remittances by Education of Migrants (all migrants) (in US$)

<table>
<thead>
<tr>
<th>Fiji (n = 176)</th>
<th>Indo-Fijian (n = 108)</th>
<th>Indigenous-Fijian (n = 66)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Some primary</td>
<td>Some secondary</td>
<td>Post-secondary</td>
</tr>
<tr>
<td>317.37</td>
<td>782.21</td>
<td>962.39</td>
</tr>
<tr>
<td>849.39</td>
<td>1,150.33</td>
<td>1,947.66</td>
</tr>
</tbody>
</table>

As expected it is evident from the first two rows of Table 3.11 that mean remittances are positively related to migrants’ educational attainment. This is also true for Indo-Fijians; however, for Indigenous-Fijians, the relationship appears to be negative, with migrants who have only some secondary education having a mean remittances level significantly higher (US$1,242.07) than those with post-secondary education (US$695.33), which is also very close to the mean level of Indo-Fijians with post-secondary education (US$640.88). This is consistent with the earlier observation that a significant number of Indigenous-Fijian migrants have taken temporary, lesser-skilled jobs in the Gulf States to where they have moved without their families and to whom they remit almost their entire wage payments. Those at the professional end of the occupational spectrum are more likely to have taken permanent positions in Australia and New Zealand to where they are more likely to have moved permanently with their immediate families, having less need or incentive to remit. These data suggest some important differences in the magnitudes and patterns of remittances among Fiji’s two main ethnic groups that could be a function of both cultural and historical factors, but could also be influenced by the relatively recent migration of Indigenous-Fijians.

Estimating Aggregate Remittances

Bearing in mind that official balance of payments data will capture only those remittances that are sent in cash form through the official financial system and where the transaction is accurately recorded and given the widespread use of non-cash remittances and the use of informal transfer channels, it is widely recognised that official balance of payments estimates are highly unreliable in most countries (Ratha, 2003). It is therefore important to use household-level survey data such as these to estimate the total volume of remittances. However, it needs to be stressed that these too are likely to underestimate remittances given the finding of previous studies in the Region that migrants do not remit only to
households, but also to churches; youth, cultural and sporting organisations; as well as relief funds at
times of natural disasters, such as cyclones (Brown, 1995). Migrants also remit to their own bank
accounts; or they acquire assets, such as real estate, without other household members necessarily
knowing about the remittance. Being based on household survey data, this study is not able to estimate
such additional flows that highlight the importance of complimentary surveys of migrants in the host
countries. With this caveat in mind, estimates of aggregate remittances flowing to each of the
countries are shown in Table 3.12.

Table 3.12: Estimates of Total Remittances Received: Fiji and Tonga (2004)

<table>
<thead>
<tr>
<th></th>
<th>Fiji</th>
<th>Tonga</th>
</tr>
</thead>
<tbody>
<tr>
<td>Per capita remittances</td>
<td>US$370.88</td>
<td>US$753.02</td>
</tr>
<tr>
<td>Population</td>
<td>836,002</td>
<td>98,322</td>
</tr>
<tr>
<td>Recipients</td>
<td>42.04%</td>
<td>90.94%</td>
</tr>
<tr>
<td>Total remittances</td>
<td>US$130,343,000</td>
<td>US$67,330,000</td>
</tr>
</tbody>
</table>

On the assumption that the sample is representative of the total population of each country, the
estimate of mean remittances received per receiving household (US$370.9 per Fijian household
member and US$753.0 per Tongan) is combined with the estimated number of recipient households in
each country (42 percent of Fijian households and 90.9 percent of Tongans) to estimate the total value
of remittances—approximately US$130.3 million for Fiji and US$67.3 million for Tonga. This
represents over 40 percent of the value of Tonga’s GDP and 154 percent of exports. For Fiji, this is
equivalent to over 6 percent of GDP and 8 percent of exports.

SECTION 3.3 INTERRELATIONSHIPS BETWEEN MIGRATION, REMITTANCES, INCOME, AND SAVING

It is well recognised in the migration literature that remittances can affect household income both
directly, as an additional supplement to household income, and indirectly, through (a) the loss of
income the migrant member(s) would have contributed (and consumed from) in the absence of
migration and (b) the effects of remittances on other sources of household income through, for
example, alleviating a budget constraint and/or reducing risk. It should not be forgotten that this study
has found that remittances can also have a direct effect on income of non-migrant households, by
providing them direct access to remittances, as previously discussed.

Migration, Remittances, and Household Income

The survey obtained information from each household on income from all sources, including wages,
farming and fishing, businesses, interest and rent, government transfers and pensions. (Subsistence,
non-cash income is not included in these tables but is the subject of further research from the same
survey data, not covered by this report.) Remittances and other private unrequited transfers were not
included as income but treated as separate supplements to income. These data were also used to
calculate households’ per capita income (by dividing total income by numbers of household members
irrespective of age and gender), which then allowed the sample to be sorted into per capita income
quintiles as shown in Figure 3.8. (The per capita income quintiles derived here are the same as those
used in Section 3.2 in relation to the discussion of remittances.) The 1st quintile is the group of
households (approximately one-fifth of households) with the lowest per capita income levels, and the
5th quintile is those with the highest per capita income levels.
As expected, mean household income in Fiji is considerably higher (US$6,586.4) than in Tonga (US$4,946.7). This ranges in Fiji from US$997 to US$16,703 per household and from US$291 to US$14,312 in Tonga. This suggests that the spread of income between the poorest and richest is much greater in Tonga; but two caveats should be noted. First, these data do not include subsistence income, which one would expect to make more of a difference to those at the lower-income end, and perhaps to a greater extent in Tonga where a larger proportion of the population is engaged in subsistence agriculture. Second, the income data do not include remittances and other private transfers.

Figure 3.8 shows that there are also substantial income differences within Fiji between the two main ethnic groups. The mean household-income level is much higher for the Indo-Fijian sub-sample (US$8,173) compared with Indigenous-Fijians (US$4,993). Although there are both Indo-Fijian and Indigenous-Fijian households over the full range of per capita income levels, Indigenous-Fijians are concentrated more at the lower end. Over 55 percent of the Indigenous-Fijian sub-sample is concentrated in the lowest two per capita income quintiles for all households in the Fiji sample, while over 55 percent of the Indo-Fijian sub-sample is concentrated in the two highest per capita income quintiles for all households in the Fiji sample.

As observed in Figure 3.5, in both countries the incidence of a household with a migrant abroad is much higher in the higher per capita income quintiles than in the lower-income groups. Moreover, the mean number of migrants among migrant-households was found to be similar for all income groups in both countries. (Not shown in tables or figures.) Hence, it would appear that while income level is associated with the presence or not of a migrant in the household, it does not appear to be related to the number of migrants in the household, providing relatively weak support for the migration-hump hypothesis.

However, on the other hand, migration and the subsequent flow of remittances also affect income of the remaining household members. First, remittances can, in the shorter term, be a substitute for what the migrant would have earned had she/he decided to stay; and so migration might have a negative impact on household income. However, if migration is of a more permanent nature, they may approximate towards an exogenous supplement to other household income especially if the household re-structures its inputs into income-generating activities. Second, having access to remittances might also have a positive impact on household income by providing insurance and removing liquidity constraints. Therefore, appropriate statistical techniques should be used to estimate the net effect of migration and remittances on incomes, after controlling for selectivity and endogeneity.
Sources of Household Income

Table 3.13 shows the composition of household cash income, for the whole sample disaggregated by per capita income quintile. Income is divided between wage income; farm and fishing income; business income; and ‘other’ income, which includes a range of sources, such as interest, rent, pensions, and government transfers.

In Fiji wages account for a much higher proportion (72.6 percent) compared with Tonga (55.3 percent) reflecting the relatively more industrially developed structure of the Fijian economy. Consistent with this is the observation that in Fiji business income accounts for 12 percent of total income in comparison with 6.7 percent in Tonga. In Tonga, other income sources account for 27.4 percent of total income, due to a higher dependency on interest, rents, pensions, and government transfers.

Within the Fiji sample—bearing in mind that the Indigenous-Fijian population is more concentrated in the lower-income quintiles and the Indo-Fijian population in the upper income quintiles—it can be seen that income from agriculture forms a much larger share of Indigenous-Fijian income, especially those in the lower-income categories; whereas business income is much more important for the Indo-Fijian sample, both at the lower and upper ends of the income spectrum. Other income sources are more important for the Indigenous-Fijian sub-sample, especially for those in the highest-income group. This can be explained mainly by the relatively high dependence of high-income Indigenous-Fijians on interest, rents, and government transfers.

Multivariate Analysis of Migration, Remittances, and Income

To examine the interrelationship between migration, remittances, and income discussed above, a two-stage econometric procedure is adopted. In the first stage, the predicted number of migrants is estimated for all households in the sample based on a selection of household and neighbourhood characteristics. This procedure controls for self-selection of migrant households. In the second stage, the impacts of (predicted) migration and remittances on income are estimated using a three-stage least squares (3SLS) procedure that allows for endogeneity across income sources and remittances and the possibility that remittances and income sources are subject to common shocks. (For a more detailed discussion of the econometric procedures and the treatment of endogeneity, see Annex D.)
Table 3.13: Composition of Income by Per Capita Income Quintiles (% total income)

<table>
<thead>
<tr>
<th>Per capita income quintile*</th>
<th>1st</th>
<th>2nd</th>
<th>3rd</th>
<th>4th</th>
<th>5th</th>
<th>Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fiji Wages</td>
<td>37.5</td>
<td>72.7</td>
<td>84.1</td>
<td>86.2</td>
<td>65.2</td>
<td>72.6</td>
</tr>
<tr>
<td>Fiji Farm/Fish</td>
<td>46.9</td>
<td>16.1</td>
<td>11.2</td>
<td>4.4</td>
<td>10.1</td>
<td>10.6</td>
</tr>
<tr>
<td>Fiji Business</td>
<td>9.4</td>
<td>9.1</td>
<td>2.1</td>
<td>4.3</td>
<td>19.0</td>
<td>12.0</td>
</tr>
<tr>
<td>Fiji Other</td>
<td>6.2</td>
<td>2.1</td>
<td>2.7</td>
<td>5.1</td>
<td>5.7</td>
<td>4.8</td>
</tr>
<tr>
<td>Fiji Total</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
</tr>
</tbody>
</table>

| Tonga Wages                 | 25.8| 50.4| 68.6| 67.7| 48.9| 55.3 |
| Tonga Farm/Fish             | 65.7| 33.2| 17.5| 10.0| 5.6 | 10.6 |
| Tonga Business              | 2.3 | 5.4 | 6.4 | 9.2 | 6.0 | 6.7  |
| Tonga Other                 | 6.2 | 11.0| 7.4 | 13.1| 39.4| 27.4 |
| Tonga Total                 | 100.0|100.0|100.0|100.0|100.0|100.0 |

| Indo-Fijian Wages           | 51.1| 71.8| 86.9| 87.2| 69.9| 76.1 |
| Indo-Fijian Farm/Fish       | 13.8| 14.2| 9.1 | 5.8 | 4.0 | 5.8  |
| Indo-Fijian Business        | 22.2| 12.0| 4.0 | 3.4 | 22.0| 14.7 |
| Indo-Fijian Other           | 12.9| 2.0 | 0.0 | 3.6 | 4.1 | 3.4  |
| Indo-Fijian Total           | 100.0|100.0|100.0|100.0|100.0|100.0 |

| Indigenous Fijian Wages     | 31.9| 72.8| 81.6| 84.4| 58.2| 69.1 |
| Indigenous Fijian Farm/Fish| 56.2| 17.8| 13.0| 2.0 | 25.1| 18.5 |
| Indigenous Fijian Business  | 6.9 | 7.2 | 0.4 | 5.8 | 6.2 | 5.1  |
| Indigenous Fijian Other     | 5.0 | 2.2 | 5.0 | 7.9 | 10.5| 7.3  |
| Indigenous Fijian Total     | 100.0|100.0|100.0|100.0|100.0|100.0 |

* Excluding subsistence (non-cash) income.

The main results from the 3SLS regressions are shown in Table 3.14a and 3.14b. In this section the discussion of the results from the regression analysis is restricted to the effects of number of migrants and remittances on household income. The regression equations included a number of other variables to control for household characteristics, the results of which are reported in Annex D. (The estimation for predicted number of migrants per household is also shown in Annex D, Table D3; and the full results for the 3SLS regressions for the income effects of migration and remittances are shown in Tables D4 and D5.)

Table 3.14a shows the impacts of migration and remittances on total household income, while Table 3.14b shows their different impacts on the three main sources of household income—farm income, business income, and wage income. Migration effects are captured through a variable reflecting the
number of predicted migrants per household; all households receive a predicted migration score. Remittances include both cash and in-kind transfers.

Table 3.14a: Estimated Effects of Migration and Remittances on Total Income*
(Coefficients in US$ values; p-values in brackets)

<table>
<thead>
<tr>
<th></th>
<th>Fiji</th>
<th>Tonga</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Remittances</td>
<td>Total income</td>
</tr>
<tr>
<td># of migrants</td>
<td>525.91</td>
<td>1,801.24</td>
</tr>
<tr>
<td>Remittances</td>
<td>-1.74</td>
<td></td>
</tr>
</tbody>
</table>

* Excluding remittances.

Table 3.15b: Estimated Effects of Migration and Remittances on Income sources*
(Coefficients in US$ values; p-values in brackets)

|          | Fiji       |            |            |           |            |
|----------|------------|------------|------------|----------|
|          | Remittances| Farm income| Business income| Wage income|
| Fiji     |            |            |            |          |
| # of migrants (predicted) | 371.53 (0.69) | 12.75 (0.96) | -237.21 (0.93) | -3313.58 (0.58) |
| Remittances | -0.17 (0.11) | 0.16 (0.72) | -2.09 (0.00) |           |
| Tonga    |            |            |            |          |
| # of migrants (predicted) | 1959.76 (0.00) | 482.53 (0.05) | 841.86 (0.06) | -2844.32 (0.39) |
| Remittances | -0.08 (0.35) | 0.69 (0.00) | -0.09 (0.70) |           |

* Excluding remittances

From the results in Tables 3.14a and 3.14b, it can be seen that the impact of migration on remittances in the two countries differs significantly. In the total income equations (Table 3.14a), in only Tonga is the positive relationship between the number of migrants and level of remittances received by the migrant household statistically significant. This is consistent with the earlier observations from the descriptive statistics that in Tonga, with its much heavier dependence on migration and remittances over a much longer period of time, migrants are ‘produced’ for remittances, and remittances are more supply-driven (i.e., by the numbers of migrants in the household).

The number of migrants could affect household income negatively or positively—the former due to there being fewer income earners remaining but the latter if having migrants open new income-generating possibilities, for instance, by reducing risk, insurance, or network effects on family farming or business activities. In neither case is the number of migrants statistically significant in the total income equations, possibly due to the cancelling out of positive and negative effects.

In Tonga, income from business and farm activities is significantly increased by the number of predicted migrants. This would suggest that having more migrants may enable the household to redirect resources to such activities as opposed to reliance on wage income or income from other sources. It could also capture help and support that come from migrants other than cash and direct material support. It has been identified that Tongan migrant households, very often with their members spread across a number of countries, can act as a stimulus to and conduit for business
activity, appropriately described in the South Pacific literature as ‘trans-national corporations of kin’ (Marcus 1981; Bertram, 1986; Brown and Connell, 1993).

Turning to the indirect impacts of remittances on total (non-remittance) income (Table 3.14a), again there is a difference. In both cases the relationship is statistically significant, but in Tonga each additional US dollar received increases household income from other non-remittances sources by US$1.30, while in Fiji it reduces household income by US$1.74. To explore these findings further, Table 3.14b shows how migration and remittances impact on the three main components of household income. Table 3.14b shows that in Tonga remittances are associated with increasing income from business activities. This supports the earlier suggestion that households experiencing increasing levels of migration and remittances over time can restructure their income-generating activities away from traditional sources of income to become more engaged in business activities. Both migration and remittances have this effect on business income, reinforcing the notion that, the greater the ‘migration orientation’ of the community, the more households are induced to engage in business activities.

In Fiji, on the other hand, the statistically significant impact of remittances is confined to wage income when increased remittances are associated with lower levels of wage income and there is also a negative relationship, albeit on the margin of being statistically significant, between remittances and farm income. This could imply that migration and remittances are a substitute for wage employment in the domestic economy and that receiving remittances effectively reduces the household’s reliance on domestic wage labour. However, it would also appear that, at this stage, remittances do not appear to have had a statistically significant, positive effect on business income as in the case of Tonga. This may reflect the lower average level of remittances and the much shorter average duration overseas of Fijian migrants, reflecting the much more recent phenomenon of migration for the purpose of generating remittance income. These relationships require further investigation before any concrete conclusions can be drawn.

Remittances and Saving

The relationships between remittances and household saving are explored more closely.

Some Measurement Issues

There is much interest in the impact of remittances on household income and expenditure, especially the extent to which remittances are used for consumption support versus saving and investment. This raises the issue of fungibility. Meaningful information cannot be obtained when recipients of remittances are asked for what they used their remittances or, if the migrant is asked for what they intended the remittances to be used. Remittances in any form, not just cash transfers, are fungible. Remittances add to the household’s income and enable the household to undertake more consumption expenditures, saving, and/or investment than would otherwise have been possible. If the recipient of cash received through remittances claims that they were used, for example, to pay for school fees, it is not known for certain that in the absence of remittances the same level of spending on schooling would not have occurred. The money that may otherwise have been used for school fees can now be diverted to another use. What therefore becomes relevant is not what the recipient believes the remittances money was used for but rather what expenditure or saving they would have had to forgo had they not received the remittances.

Another issue that needs to be emphasised is that not all remittances are necessarily sent to the migrant’s household. As noted, non-migrant households receive remittances and, as was found from other surveys, a part of a migrant’s remittances is channelled to his/her own funds and investments (Brown and Poirine, 2005). A survey of receiving households will not pick up remittances of this type. Thus, restricting the analysis to surveys of migrant-sending households may fail to capture a significant part of the total remittances sent and therefore the overall contribution of remittances to
income, saving, and investment. These points highlight the need for complementary surveys of the migrants themselves in the host countries.

**Saving Levels and Recipients of Remittances**

The descriptive statistics presented in Figure 3.9 point to some interesting differences in saving behaviour between households receiving or not receiving remittances. Respondents were asked whether and how much they had saved in various forms in the preceding year. More specifically, the questionnaire asked: During 2004, did any household member put money away for emergencies or future needs? If the respondent answered in the affirmative, the amount saved was requested. The proportion of households that had managed to save in 2004 was 69.1 percent in Fiji and 58.6 percent in Tonga (Figure 3.9). When broken down by per capita income quintile, it is evident that, as expected, this ratio increases with income from 42 percent to 89 percent in Fiji, and 36 percent to 80 percent in Tonga (right panel of Figure 3.9).

![Figure 3.9: Households with Savings](image)

However, there is a noticeable difference between households that received remittances (in addition to other income sources) compared with those that did not, as shown in Figure 3.9 (left panel). It can be seen here that in Fiji, 79 percent of those who had received remittances had saved, in comparison with 62 percent of those who had not received remittances. In Tonga, where over 90 percent of households had received remittances, there is still a difference, albeit not as great, with 59 percent of those who received remittances having saved versus 52 percent in the case of those who had not received remittances. In this regard it should also be noted that there are greater levels of remittances to non-migrant households in Tonga (Figure 3.3 in Section 3.2).

**Saving Levels and Level of Income**

Table 3.15 shows saving by per capita income quintiles. As expected, there is a positive relationship between income and the proportion of households that saved. It is also apparent that across all quintiles, a higher proportion of Fijian households had saved, suggesting a cultural difference in saving propensities. Moreover, the mean level of household saving is consistently higher across all quintiles.

When comparing saving behaviour between the two main Fiji sub-samples, it is noticeable that a relatively higher proportion of Indigenous-Fijians in the lowest two quintiles had saved, and that the
mean levels of saving in these two groups were significantly higher than the levels for Indo-Fijians in
the same income quintiles. This would be consistent with the earlier observation that the Indigenous-
Fijian households in the lower two quintiles received on average a much higher level of remittances
than their Indo-Fijian counterparts.

Table 3.16: Saving and Per Capita Income Quintile (2004 US$)

<table>
<thead>
<tr>
<th>By country</th>
<th>Mean saving per capita income quintile</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1st</td>
</tr>
<tr>
<td>Fiji</td>
<td>1,416.26</td>
</tr>
<tr>
<td>Tonga</td>
<td>584.38</td>
</tr>
<tr>
<td><strong>Fiji by ethnic group</strong></td>
<td></td>
</tr>
<tr>
<td>Indigenous-Fijian</td>
<td>1,501.58</td>
</tr>
<tr>
<td>Indo-Fijian</td>
<td>195.93</td>
</tr>
</tbody>
</table>

Approx. n=100 in each Tongan quintile and n=84 in each Fiji quintile.

To examine this further, Table 3.16 compares saving between recipients and non-recipients of
remittances. As noted, in both countries the proportion of households that saved was much higher for
those who received remittances, particularly among the Fijian households, and the mean level of
saving was also much higher for those who received remittances; among Fijian households recipients
of remittances saved on average 63 percent more than non-recipients. Among Tongans, recipients
saved on average 35 percent more. However, within the Fiji sample, a major difference between the
two main ethnic groups is apparent. For Indo-Fijians, the proportion of savers was higher among
remittance recipients, and the mean levels of saving is similar for the two groups; but among the
Indigenous-Fijian group, substantially more remittance recipients saved, and the mean level was
approximately 250 percent more than non-recipients. These relationships are explored later using
appropriate multivariate techniques.

Caution needs to be exercised in interpreting relationships from these tables given that it is not
methodologically correct to infer from such comparisons that remittances necessarily cause higher
saving and asset accumulation. This ignores the possibility that migration and remittances are
associated more with households with characteristics conducive to higher-saving propensities and
asset accumulation. Migrants are not necessarily randomly selected across all households, and
remittance recipient households will not necessarily have the same characteristics and attributes
affecting saving behaviour as the non-recipient households. Again the problem of self-selection and
possible endogeneity arise. These issues are addressed in the econometric analysis in the following
section and in the corresponding Annex E.
Table 3.17: Household Saving by Remittances Recipients: Fiji by Ethnic Group

<table>
<thead>
<tr>
<th>Saved in 2004 (% households in category)</th>
<th>Remittances</th>
<th>No remittances</th>
<th>Total sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indo-Fijian (n = 197)</td>
<td>80.4</td>
<td>67.4</td>
<td>74.11</td>
</tr>
<tr>
<td>Indigenous-Fijian (n = 211)</td>
<td>76.4</td>
<td>59.0</td>
<td>64.76</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Saving in 2004 (US$)</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Indo-Fijian (n = 197)</td>
<td>2,132.42</td>
<td>2,378.49</td>
<td>2,251.08</td>
</tr>
<tr>
<td>Indigenous-Fijian (n = 211)</td>
<td>3,210.69</td>
<td>1,278.46</td>
<td>1,937.80</td>
</tr>
</tbody>
</table>

Multivariate Analysis of Remittances and Saving

The relationships between remittances and saving were analysed taking into account the possible endogeneity of the relationships using appropriate instrumental variables. The instruments were found to be both relevant and valid according to the test statistics. However, further endogeneity tests showed that for both samples remittances were not endogenous in the saving equations. (For a detailed discussion of the choice of instruments and reporting of the test statistics, see Annex E.) Both OLS and Tobit regressions were then estimated with saving as the dependent variable and remittances as an explanatory variable. As noted, the savings question in the survey relates to gross saving, not saving net of borrowing. The saving data are therefore censored at zero, which would justify estimating a Tobit model. Other control variables included in the equations are discussed in Annex E. In addition to these controls one additional interaction term was introduced. In view of the indication from the descriptive statistics discussed in Section 3.3 that the strong association between remittances and saving did not appear to hold for households in the highest-income quintile, remittances were interacted with a dummy variable for households in the highest-income quintile in each country.

The summary results of the estimated relationships between remittances and saving are shown in Table 3.17. The full results of both OLS and Tobit models are reported and discussed in Annex E.

Table 3.18: Saving and Remittances: OLS and Tobit Estimates

<table>
<thead>
<tr>
<th>Dep. variable = Savings</th>
<th>Fiji</th>
<th>Tonga</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>OLS</td>
<td>Tobit</td>
</tr>
<tr>
<td>Remittances</td>
<td>0.734*</td>
<td>0.805*</td>
</tr>
<tr>
<td>Remittances* highest income</td>
<td>-0.391</td>
<td>-0.090</td>
</tr>
<tr>
<td>Adj. R2 (p-value)</td>
<td>0.265 (0.00)</td>
<td>(0.00)+</td>
</tr>
<tr>
<td>Observations</td>
<td>407</td>
<td>407</td>
</tr>
</tbody>
</table>

* sig at 5%; ** sig at 10% level; + p-value prob > Chi-sq

The coefficients on the remittances variable indicate that remittances are a much stronger determinant
of saving in Fiji than in Tonga. The coefficient on the remittances variable in the OLS equation is 0.73 in Fiji and 0.04 in Tonga. The interaction term for remittances to high-income households is, as expected, negative in all equations but is only statistically significant in the case of Tonga. The value of the negative coefficient on the interaction term for Tonga is greater than the positive coefficient on remittances, indicating that for the households in the highest-income quintile remittances could have a net negative impact on saving. The reason why this might be so is not clear from the results, especially as Tongan households in the highest-income quintile also received more remittances on average than households in all other quintiles. One possible explanation is that high-income households in receipt of remittances also make greater contributions both to other poorer households within Tonga and to community-level events, such as weddings, funerals, and other major, customary expenses, especially those relating to church-based activities. This would have the effect of reducing their discretionary, disposable household income. There is some evidence of this, as noted in the discussion of income distribution in Section 3.5. It was found that households in the highest-income quintile in Fiji and Tonga make net income transfers to other poorer households, with the result that net disposable household income from all sources (including remittances and internal transfers to or from other households) is reduced (Table 3.12). In the case of Fiji, mean disposable household income for the upper quintile actually falls below the mean disposable income level before taking remittances and inter-household transfers into account.

In all other income quintiles in both countries, mean disposable household income, including other internal inter-household transfers, is always greater than mean income plus remittances. It is this that most probably explains the negative coefficient on the interaction term. When donations and obligations to community-level organisations and events are also factored in, it is most likely that mean disposable household income for the top income quintile in Tonga will also be less than mean income before taking remittances and into account. It is also worth noting that although the results indicate that remittances reduce the saving of the richest households, the overall net effect of these redistributive obligations and inter-household transfers could be positive given the positive relationship between remittances and saving in all other income quintiles. These findings indicate a need to explore the possible interrelationships between international transfers (i.e., remittances) and internal transfers among households within the remittance-receiving countries and the extent to which remittances are effectively redistributed among other migrant and non-migrant households.

It can therefore be concluded that in general there is a positive relationship between remittances and household saving in both samples. Given the large volume of remittances in relation to GDP, especially in Tonga (Table 3.12), it can be expected that remittances make an important contribution to national saving and potentially to domestic investment. The findings reported in the previous section in relation to the positive impacts of migration and remittances on households' business income reinforce this conclusion.

**SECTION 3.4 REMITTANCES AND HUMAN CAPITAL**

This section is concerned primarily with the relationship between migration, remittances, and education—investment in human capital. Migration is rarely an individual decision but takes places within an extended family context, where families may allocate individuals (as human capital) into a range of distant labour markets. Households make decisions about human capital, migration, and remittances as part of an overall household strategy. In this context, migration, remittances, and human capital decisions are not independent of one another. They are all interrelated in a complex system with feedbacks, as illustrated in Figure 3.10, where the arrows indicate causal relationships in both directions.
While it might be argued that without migration there cannot be remittances (i.e., migration causes remittances), there is also the case that the decision to migrate can be influenced strongly by remittance motivations (i.e., remittances cause migration).\textsuperscript{16} Similarly while the attained education level of a household member can influence decisions about migration (i.e., human capital causes migration), so too can migration opportunities influence an individual’s decisions about investment in human capital (i.e., migration causes human capital). These complex interrelationships make it difficult to isolate the effect of one variable—in this case, remittances; on another, human capital.\textsuperscript{17}

From Figure 3.10, two possible ways in which remittances could influence investment in human capital are identified: (a) a direct relationship through which the availability of remittances enables investment in human capital that would not otherwise have occurred (i.e., remittances cause investment in human capital); and (b) an indirect relationship through which remittances-driven migration induces household to accumulate more human capital (i.e., remittances cause migration, which in turn causes investment in human capital).\textsuperscript{18} In practice, migration, remittances, and investment are observed to be occurring simultaneously making it difficult to ascertain the nature and direction of the causal relationships.

**Educational Attainment and Recipients of Remittances**

To assess the possible relationships between migration, remittances, and the education of non-migrant household members, all resident household members in the sample were grouped according to educational attainment as shown in Table 3.18.
It is evident from these data that there is more variability in educational attainment among the Fiji sample. A larger proportion of the Fiji sample is relatively poorly educated; 10.3 percent have no schooling or some primary schooling, only in comparison with 3.7 percent of Tongans. This could be explained by the fact that in Fiji, although schooling is free for the first eight years, it is not compulsory. In Tonga, it is free and compulsory up to age 14. It is perhaps for this reason that there is less educational variability among Tongans and, as discussed below, 63.4 percent of resident Tongans have more than 8 years of education, in comparison with 48.6 percent of those residents in Fiji. Again, there is a difference between the two main ethnic groups in Fiji. While 54.3 percent of Indo-Fijians have more than 8 years of schooling, only 44.2 percent of Indigenous-Fijians do. However, Fiji also has a larger proportion of its population with post-secondary education—17.2 percent in comparison with 10.5 percent of Tongans.

Table 3.19 compares educational attainment between individuals in households who had received remittances with individuals who had not; the comparison is done with a view to a preliminary testing of any association between migration and remittances on the one hand, and educational attainment on the other. The first panel of Table 3.19 considers all individuals in the household over the age of 14 while the second panel considers only household members aged 14 to 17 years.

The age of 14 is chosen as the cut-off as this is the age to which schooling is free in the two countries and compulsory in the case of Tonga. The two sub-samples are then based on all individuals aged 14 years or more and secondly on those aged 14 to 17 years currently in school.
Table 3.20: Percentage of individuals over 14 years of age with more than 8 years of education

<table>
<thead>
<tr>
<th>Country</th>
<th>Remittances</th>
<th>No remittances</th>
<th>Total sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fiji (n=1,937)</td>
<td>53.3</td>
<td>45.3</td>
<td>48.6</td>
</tr>
<tr>
<td>Tonga (n=2,726)</td>
<td>63.3</td>
<td>63.6</td>
<td>63.4</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Country</th>
<th>% individuals over age 14-17</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fiji (n=160)</td>
<td>80.0</td>
</tr>
<tr>
<td>Tonga (n=259)</td>
<td>94.9</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Fiji by ethnic group</th>
<th>% individuals over age 14</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indo-Fijians (n=853)</td>
<td>57.8</td>
</tr>
<tr>
<td>Indigenous-Fijians (n=1,084)</td>
<td>47.8</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Fiji by ethnic group</th>
<th>% individuals over age 14-17</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indo-Fijians (n=57)</td>
<td>96.4</td>
</tr>
<tr>
<td>Indigenous-Fijians (n=103)</td>
<td>67.0</td>
</tr>
</tbody>
</table>

Although Fiji is a more developed country with a higher per capita income than Tonga, the proportion of Tongans reporting more than 8 years of education is much higher (63.4 percent of all over age 14 and 95 percent of those ages 14 to 17) than in Fiji (48.6 all over age 14 and 76.3 percent of those ages 14 to 17).19

However, it is interesting to note that there is very little difference between Tongans who received remittances and those who did not, while a much higher proportion of Fijian householders who had received remittances (53.3 percent of all over age 14 and 80 percent of those ages 14 to 17) had more than 8 years of education compared with those who did not receive remittances (45.3 percent of all over age 14 and 73.7 percent of those ages 14 to 17).

Bearing in mind that a much larger proportion of Tongan households receive remittances, that this society has been migration- and remittance-oriented over a much longer period of time, and that education to age 14 is free and compulsory, it is not altogether surprising that there is not a substantial difference between those who receive remittances and those who do not. However, it is interesting that, in terms of this measure, Tongans appear to be better educated at least at school-age level than Fiji’s population. In addition, variability in educational attainment in the Fiji sample, between those
who receive and those who do not receive remittances, appears strong. It should be remembered that a larger proportion of the resident Fiji population has post-secondary education (Table 3.18). Some aspects of the relationship between remittances and education are tested using appropriate multivariate analysis below.

The two lower panels of Table 3.19 show the same data for the two main ethnic groups in Fiji. As expected, Indo-Fijians appear better educated (with 54 percent having more than 8 years of education) than Indigenous-Fijians (with 44 percent). In relation to those ages 14 to 17, this difference is even greater; 89.5 percent of Indo-Fijians had more than 8 years of education in comparison with only 68.9 percent of Indigenous-Fijians.

**Multivariate Analysis of Remittances and Education**

The relationships between remittances and educational attainment of the households were analysed in relation to two aspects of educational attainment. First, for educational attainment of school-aged household members, a dummy variable (EXTRA EDUCATION) was created for all children between 14 and 17 years of age, which takes on a value of one (1) for those who have obtained more than 8 years of education and zero (0) for all other children. The analysis using this variable seeks to examine if migration and remittances are linked to extra investment in schooling, beyond the free years of education. The results reported from this analysis relate only to the Fiji sample.

The second aspect of the relationship between migration and education, which is investigated, is the impact of migration on tertiary education of the migrant household's members. Here the sample is all non-migrant individuals in the household over 21 years of age. An individual was identified as having tertiary education if his/her years of education was in excess of 13 (i.e., beyond completion of secondary education) and denoted by the variable TERTIARY. This analysis was undertaken for both countries in the dataset and seeks to examine whether a household with stronger migration-orientation invests more in tertiary education.

In the regressions, the relationships among migration, remittances, and educational attainment are analysed taking into account the possible endogeneity of the relationships using appropriate instrumental variables. (See Annex F for a discussion of how endogeneity is treated.) In the first equation, level of remittances (in all forms) is used as the primary regressor with EXTRA EDUCATION as the dependent variable. Remittances rather than number or presence of migrants is used as the regressor as it was found earlier (Section 3.2) that many households without migrants had received remittances. Furthermore, it is hypothesised that at this optional level of schooling for which there are both direct educational costs as well as other opportunity costs, remittances can alleviate the household's budget constraint allowing the children to acquire more years of education before entering the labour force. Endogeneity tests showed that the remittances variable was not exogenous. The model was accordingly estimated using an instrumental-variable probit model. The results are reported in Tables 3.20 and 3.21. (See Annex F for the full set of results with all covariates.)
Table 3.21: Schooling and Remittances Instrumental-Variable Probit Results: Fiji (p-values in brackets)

<table>
<thead>
<tr>
<th></th>
<th>Extra education</th>
</tr>
</thead>
<tbody>
<tr>
<td>Remittances (instrumented)</td>
<td>0.0003 (0.08)</td>
</tr>
<tr>
<td>Indo-Fijian</td>
<td>0.8956 (0.01)</td>
</tr>
<tr>
<td>Observations</td>
<td>158</td>
</tr>
<tr>
<td>Wald Chi-sq (p-value)</td>
<td>36.69 (0.00)</td>
</tr>
</tbody>
</table>

Table 3.22: Tertiary Education and Migration Probit Results: Fiji and Tonga (p-values in brackets)

<table>
<thead>
<tr>
<th></th>
<th>Fiji (instrumental-variable probit)</th>
<th>Tonga (probit)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Migration Intentions</td>
<td>0.2546 (0.00)</td>
<td>-0.09 (0.43)</td>
</tr>
<tr>
<td>Indo-Fijian</td>
<td>-0.3377 (0.02)</td>
<td></td>
</tr>
<tr>
<td>Wald Ch-sq</td>
<td>111.26 (0.00)</td>
<td>48.76 (0.00)</td>
</tr>
<tr>
<td>Observations</td>
<td>1121</td>
<td>1376</td>
</tr>
</tbody>
</table>

The coefficient on the remittances variable is positive and statistically significant. This indicates that remittances influence whether a student will acquire education beyond the 8 years provided by the government. Due to the small sub-sample size for those ages 14 to 17 in each of Fiji’s main ethnic groups, it was not possible to re-estimate the Extra Education equations by ethnicity. A dummy variable for Indo-Fijian ethnicity was therefore included in the regression. This was also positive and statistically significant, confirming the differences observed in the descriptive statistics in Table 3.19.

In the second model, the effect of migration intentions on attainment of tertiary qualification is analysed; two alternative principal regressors were tested, remittances and a variable to capture the ‘migration orientation’. The latter was chosen to test the hypothesis that the accumulation of human capital at this level is migration induced rather than credit constrained. Migration orientation was captured through a variable indicating the presence of a household member who intended to migrate in the near future. Again the possibility of endogeneity between migration orientation and tertiary education was accounted for in the estimation procedure (See Annex F for further details of the choice of instrument and reporting of the test statistics). Endogeneity tests showed that for the Fiji sample the migration-orientation variable was endogenous, requiring estimation using an instrumental-variable probit model. With Tonga on the other hand, as the tests showed that there was no endogeneity, the model was estimated using a probit model.
In Fiji there is a positive, statistically significant relationship between the household’s migration orientation and the probability that individuals within that household have acquired tertiary-level education, controlling for other factors. Moreover, after controlling for all other variables, those of Indo-Fijian ethnicity appear less likely to have acquired tertiary education.

For Tonga on the other hand, there is no statistically significant relationship between migration intentions and acquiring tertiary education. This is somewhat surprising given the longer migration history and heavier dependence on migration and remittances. This could be explained by Tongan families having relatively easier access to the two main destination countries, Australia and New Zealand, through family networks and their ability to qualify for residency under the ‘family reunion’ category that is not education or occupation related. These possibilities require further investigation.

**SECTION 3.5 REMITTANCES, INCOME DISTRIBUTION, AND POVERTY INDICATORS**

In regard to poverty alleviation and inequality, the impact of migration and remittances is largely determined by whether or not households at the lower end of the income distribution have access to those remittances. Should migrants be positively selected in relation to variables such as income and education, with only households in the upper end of the income distribution having access to remittances, inequality and poverty (at least a relative measure of poverty) will be expected to worsen.

This section presents several estimates of cash income distribution and poverty with and without remittances. This provides an indication of the extent to which remittances affect the distribution of disposable income, though further work is required. First, it does not include non-cash income, such as subsistence farming. Second, it is based on the simplifying assumption that both migration and remittances are exogenous, and so there is no need to consider the counterfactual situation where migration results in a direct loss of household earnings. Third, the with-remittances income calculations do not take account of the indirect effects of remittances on other non-remittances sources of household income.

**Remittances and Income Distribution**

It should be noted that the indicators were calculated on a per capita basis, adjusted for household size. Table 3.22 shows how per capita income is distributed among the quintile income groups before and after the inclusion of migrants’ remittances and other internal transfers.

As noted, the Fiji sample does not include households in Vanua Levu or the outer-islands. These households would be net recipients of internal transfers in Fiji. As observed from Table 3.22, and Figure 3.11, the average income of the poorest quintile in Fiji increases by 82 percent when remittances are included. This increment is stronger in Tonga, where the average income of the poorest quintile increases by 639 percent when remittances are included.

Table 3.23 and Figure 3.12 show that remittances and internal transfers have a strong positive impact on Tonga’s income distribution, where the poorest 40 percent of the population’s share of cash income increases from 7.3 percent to 18.7 percent, and the richest 20 percent falls from almost 63 percent to less than 50 percent. For Fiji the impact is also positive but weaker as one would expect with the poorest 40 percent share increasing from 9 percent to 11.6 percent, and the richest 20 percent falling from 57.8 percent to 53.8 percent. It should be borne in mind that this does not account for indirect effects of remittances on income, such as income from investments funded by remittances, which is addressed in the econometric analysis.
Table 3.23: Income Distribution: Mean levels by Quintile

<table>
<thead>
<tr>
<th>Country</th>
<th>Income quintiles</th>
<th>n=</th>
<th>Av. income</th>
<th>Av. inc + rem</th>
<th>Change (av. inc + rem) / av. inc.</th>
<th>Av. inc. + rem + net tTr.</th>
<th>Change (av inc + rem + net tr) / av inc</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fiji</td>
<td>1st</td>
<td>406</td>
<td>160.85</td>
<td>293.29</td>
<td>82</td>
<td>318.88</td>
<td>98</td>
</tr>
<tr>
<td></td>
<td>2nd</td>
<td>382</td>
<td>472.80</td>
<td>534.62</td>
<td>13</td>
<td>510.84</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td>3rd</td>
<td>394</td>
<td>810.78</td>
<td>925.75</td>
<td>14</td>
<td>922.31</td>
<td>14</td>
</tr>
<tr>
<td></td>
<td>4th</td>
<td>394</td>
<td>1,513.53</td>
<td>1,590.83</td>
<td>5</td>
<td>1,528.95</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>5th</td>
<td>389</td>
<td>4,088.41</td>
<td>4,197.78</td>
<td>3</td>
<td>3,866.17</td>
<td>-5</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>1,965</td>
<td>1,400.55</td>
<td>1,500.14</td>
<td>7</td>
<td>1,422.06</td>
<td>2</td>
</tr>
<tr>
<td>Tonga</td>
<td>1st</td>
<td>572</td>
<td>83.27</td>
<td>615.46</td>
<td>639</td>
<td>676.65</td>
<td>713</td>
</tr>
<tr>
<td></td>
<td>2nd</td>
<td>520</td>
<td>256.38</td>
<td>524.08</td>
<td>104</td>
<td>545.74</td>
<td>113</td>
</tr>
<tr>
<td></td>
<td>3rd</td>
<td>548</td>
<td>489.27</td>
<td>885.01</td>
<td>81</td>
<td>888.34</td>
<td>82</td>
</tr>
<tr>
<td></td>
<td>4th</td>
<td>543</td>
<td>871.22</td>
<td>1,220.30</td>
<td>40</td>
<td>1,231.51</td>
<td>41</td>
</tr>
<tr>
<td></td>
<td>5th</td>
<td>543</td>
<td>2,861.77</td>
<td>3,341.50</td>
<td>17</td>
<td>3,213.83</td>
<td>12</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>2,726</td>
<td>908.32</td>
<td>1,315.70</td>
<td>45</td>
<td>1,310.15</td>
<td>44</td>
</tr>
</tbody>
</table>
Figure 3.11: Percentage Change in Average Quintile Income

Fiji: % Change
Average Quintile Income

Tonga: % Change
Average Quintile Income

When Including Remittances

When Including Remittances + Net Transfers
Table 3.24: Income Distribution: Percentage Shares by Quintile

Distribution cash income and transfers by quintile+

<table>
<thead>
<tr>
<th>Quintiles</th>
<th>Cash income only (Total income)</th>
<th>Income + remittances (Total income)</th>
<th>Income, remittances + transfers (Total income)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fiji</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1st</td>
<td>2.4</td>
<td>4.0</td>
<td>4.6</td>
</tr>
<tr>
<td>2nd</td>
<td>6.6</td>
<td>6.9</td>
<td>7.0</td>
</tr>
<tr>
<td>3rd</td>
<td>11.6</td>
<td>12.4</td>
<td>13.0</td>
</tr>
<tr>
<td>4th</td>
<td>21.7</td>
<td>21.3</td>
<td>21.6</td>
</tr>
<tr>
<td>5th</td>
<td>57.8</td>
<td>55.4</td>
<td>53.8</td>
</tr>
<tr>
<td>Total</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
</tr>
<tr>
<td>Tonga</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1st</td>
<td>1.9</td>
<td>9.8</td>
<td>10.8</td>
</tr>
<tr>
<td>2nd</td>
<td>5.4</td>
<td>7.6</td>
<td>7.9</td>
</tr>
<tr>
<td>3rd</td>
<td>10.8</td>
<td>13.5</td>
<td>13.6</td>
</tr>
<tr>
<td>4th</td>
<td>19.1</td>
<td>18.5</td>
<td>18.7</td>
</tr>
<tr>
<td>5th</td>
<td>62.8</td>
<td>50.6</td>
<td>48.9</td>
</tr>
<tr>
<td>Total</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
</tr>
</tbody>
</table>
Remittances and Poverty Indicators

As noted, the questionnaire included a minimum cash income question which asked respondents how much money a family like theirs required every week 'to just get by.' This information was used to build a subjective poverty line based on the median of individual required cash income 'to just get by,' as shown in Table 3.24.
Table 3.25: Subjective Required Cash Income vs. Actual Total Cash Income  
(Median US$, 2004)

<table>
<thead>
<tr>
<th></th>
<th>Individual income + remittances + transfers</th>
<th>Individual required cash income ‘to just get by’</th>
<th>Required as % of actual</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fiji National*</td>
<td>857</td>
<td>600</td>
<td>70.0</td>
</tr>
<tr>
<td>Urban</td>
<td>1,154</td>
<td>840</td>
<td>72.8</td>
</tr>
<tr>
<td>Rural</td>
<td>630</td>
<td>415</td>
<td>65.9</td>
</tr>
<tr>
<td>Tonga National</td>
<td>825</td>
<td>600</td>
<td>72.7</td>
</tr>
<tr>
<td>Urban</td>
<td>1,064</td>
<td>660</td>
<td>62.0</td>
</tr>
<tr>
<td>Rural main island</td>
<td>722</td>
<td>660</td>
<td>91.4</td>
</tr>
<tr>
<td>Rural outer island</td>
<td>663</td>
<td>494</td>
<td>74.5</td>
</tr>
</tbody>
</table>

* Only main island, Viti Levu.

Table 3.24 compares the subjective deprivation line with individual income, including remittances and transfers for urban and rural areas in both countries. The minimum required income to get by in rural areas was estimated as US$415 in Fiji (Viti Levu), which is much lower than in cities and towns (US$840), probably reflecting the impact of subsistence farming and price variation, as well as the spatial separation of urban and rural populations. As a percentage of total income, the required cash income to get by is also higher in urban (72.8 percent) than in rural Viti Levu (65.9 percent). In Tonga, the minimum required cash income ‘to just get by’ is the same in urban and rural areas of the main island (US$660). This might be partly explained by the main island size, which might make the social, spatial, and market boundaries between urban and rural areas less clearly demarcated. The minimum income required ‘to just get by’ in rural outer-islands of Tonga is significantly lower (US$494), which might reflect the impact of price variation, as well as spatial separation from the main island.

Table 3.25 and Figure 3.13 provide a number of measures of income distribution and degree of ‘poverty’ for the two countries, with and without remittances. The median of minimum required cash income, as described in Table 3.24, is used to delineate ‘subjective deprivation lines’ for the respective populations. These are US$600 for the total population of Fiji, US$840 for urban Fiji, and US$415 for rural Fiji. In Tonga these are US$600 for the total population, US$660 for the rural and urban population on the main island, and US$494 for the outer island population.
Three measures of deprivation were then calculated, based on these ‘subjective deprivation lines’ as shown in the three panels of Figure 3.13: (a) headcount ratio, which indicates the proportion of the population on an income level below the median ‘required income’; (b) required gap ratio, which measures the average percentage deviation of actual income from the required level for the population living below the ‘subjective deprivation line’; and (c) Sen index, which combines two previous measures with the Gini coefficient for those below the ‘subjective deprivation line’.

<table>
<thead>
<tr>
<th>Gini coefficient</th>
<th>Cash income only</th>
<th>Income + remittances</th>
<th>Income, remittances + transfers</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fiji</td>
<td>0.552</td>
<td>0.54</td>
<td>0.541</td>
<td>-0.011</td>
</tr>
<tr>
<td>Tonga</td>
<td>0.605</td>
<td>0.513</td>
<td>0.495</td>
<td>-0.11</td>
</tr>
</tbody>
</table>

| Deprivation measures Fiji | | | | |
| Headcount ratio (US$) | 37.83 | 34.1 | 35.17 | -2.66 |
| Gap ratio (US$) | 19.3 | 17.01 | 17.83 | -1.47 |
| Sen index | 25.44 | 22.32 | 23.04 | -2.4 |

| Urban Fiji | | | | |
| Headcount ratio (US$) | 36.72 | 32.9 | 35.74 | -0.98 |
| Gap Ratio (US$) | 15.98 | 12.3 | 13.74 | -2.24 |
| Sen index | 21.56 | 16.99 | 18.93 | -2.63 |

| Rural Fiji | | | | |
| Headcount ratio (US$) | 39.38 | 37.94 | 38.42 | -0.96 |
| Gap ratio (US$) | 19.93 | 18.43 | 18.8 | -1.13 |
| Sen index | 25.6 | 23.88 | 24.31 | -1.29 |

| Tonga | | | | |
| Headcount ratio (US$) | 57 | 33.49 | 32.32 | -24.68 |
| Gap ratio (US$) | 32.87 | 14.85 | 13.52 | -19.35 |
| Sen index | 41.87 | 19.7 | 17.91 | -23.96 |

| Tonga main island | | | | |
| Headcount ratio (US$) | 58.53 | 33.69 | 33.64 | -24.89 |
| Gap ratio (US$) | 33.45 | 12.73 | 12.46 | -20.99 |
| Sen index | 42.88 | 17.33 | 16.96 | -25.92 |

| Tonga outer islands | | | | |
| Headcount ratio ($) | 57.53 | 41.71 | 38.66 | -18.87 |
| Gap Ratio ($) | 32.47 | 23.08 | 18.3 | -14.17 |
| Sen Index | 42.26 | 28.75 | 23.71 | -18.55 |

Table 3.26: Measures of Inequality and Subjective Deprivation
The data show that by all measures, the population of Tonga suffers more deprivation than Fiji before taking account of remittances and other transfers. They also show that relative deprivation is worse among Fiji’s rural population, but very similar for Tonga between the main and outer islands. Once remittances and transfers are taken into account, relative deprivation, as estimated by the Sen index, improves for both countries but with some important differences: (a) urban Fiji’s deprivation is reduced by more than in the case of rural Fiji, and Tonga’s relative deprivation on the main island is reduced considerably more than on the outer islands; and (b) main island Tonga’s relative deprivation is reduced to such an extent that with remittances and transfers their situation is better than in the case of both rural and urban Fiji.

Therefore, comparing income distribution and relative deprivation with and without remittances and internal transfers indicates that remittances perform a positive redistributive and social protection function, but the strength of the impact varies between countries and regions within countries. Further econometric testing of the impact of remittances on poverty and inequality, using official poverty lines and controlling for sample selection bias, endogeneity, non-cash income, and equivalence scales is required. This is addressed in further econometric analysis to be reported at a later stage.

**Figure 3.13: Inequality and Subjective Deprivation Measures**

Fiji: Percentage Income of the Poorest 40%  
Fiji: Percentage Income of the Richest 20%  
Tonga: Percentage Income of the Poorest 40%  
Tonga: Percentage Income of the Richest 20%  

- **Income, Remittances + Transfers**  
- **Income + Remittances**  
- **Cash Income Only**

---

85
Remittances and Measures of Comparative Wealth

The questionnaire collected information regarding 22 types of assets and housing characteristics. These included agricultural and non-agricultural land, buildings, and household consumer durables, such as whitegoods and vehicles. Characteristics of the household’s dwelling contained information about number of rooms; floor, roof and wall materials; sources of water and lighting; and type of toilet. Data on these assets and dwelling characteristics were used to build a linear index to serve as a proxy for household wealth. In constructing this index, Principal Components Analysis was applied, following Filmer and Pritchett (2001).

During the modelling, the land ownership variable was discarded to build the ‘wealth index’ in both countries, since it did not appear to be positively correlated to ownership of other assets, and affected the internal coherence and robustness of the wealth index. Therefore, it appears that the assumption that household long-term wealth is the determinant of variation in household ownership of assets does not hold regarding land in Fiji and Tonga. This is not altogether surprising when taking into account the land ownership regimes in both countries. In Fiji, Indo-Fijians do not usually own land but lease land from Indigenous-Fijian landowners, whereas Indigenous-Fijians have access to land owned by kin-based land owning groups (mataqali). In Tonga, land is owned by individual households and, in principle, all adult males have an equal entitlement to a piece of land.

In constructing the wealth index, data on 14 assets and 9 dwelling characteristics were used. It should be noted that some assets (such as tractors) and some dwelling characteristics (such as roofing materials) were excluded from the index as there was not enough variation among the sampled households. Table 3.26 present the main results from the construction of the wealth index for Fiji and Tonga. The first column shows the scoring factors for each asset, obtained from the Principal Components Analysis; the second and third column present the mean and standard deviation for the corresponding asset variables; and fourth column shows by how much the index varies between a household that owns an asset and one that does not.24

From Table 3.26, it can be observed that for a Fijian household owning a fridge would increase the wealth index by 0.60, while having a low-quality floor would decrease the index by 0.50. Likewise, a Fijian household that owns a gas stove would have a wealth index 0.60 higher than a household that does not; while not having flush toilet would lower the index by 0.60. In Tonga, owning kitchen appliances would increase the index by 0.88, and a gas stove would raise it by 0.84. In contrast, low-quality floor materials would reduce the index by 1.41, and low-quality wall materials would decrease it by 1.21, while not having a flush toilet will decrease the index by 0.87.
The wealth index was used to classify households in three categories, as shown by Table 3.27. The first columns in Table 3.27 show the asset variable mean for those at the bottom 40 percent of the ‘wealth index’ distribution (the poorest 40 percent), while second and third columns present the mean for the middle 40 percent and the wealthiest 20 percent of households, respectively. Thus, while only 7 percent of the poorest households in Fiji have a landline telephone, 47 percent of the middle and 74 percent of the wealthiest do. In Tonga, landline telephone penetration is higher across the three groups, with 20 percent of the poorest, 75 percent for the middle and 96 percent of the wealthiest having access to landline telephones. On the other hand, as can be seen from the last row in the shaded Fiji columns of Table 3.27, the average wealth index for the poorest group of households is 4.49 lower than for the middle and 6.52 lower than for the richest.
### Table 3.28: Assets Ownership Mean by Wealth Index: Fiji and Tonga

<table>
<thead>
<tr>
<th></th>
<th>Poorest 40%</th>
<th>Middle 40%</th>
<th>Wealthiest 20%</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Fiji</td>
<td>Tonga</td>
<td>Fiji</td>
</tr>
<tr>
<td>Fridge</td>
<td>0.27</td>
<td>0.36</td>
<td>0.96</td>
</tr>
<tr>
<td>Gas stove</td>
<td>0.23</td>
<td>0.64</td>
<td>0.92</td>
</tr>
<tr>
<td>Kitchen appliances</td>
<td>0.36</td>
<td>0.91</td>
<td>0.92</td>
</tr>
<tr>
<td>Washing machine</td>
<td>0.08</td>
<td>0.29</td>
<td>0.78</td>
</tr>
<tr>
<td>Fans</td>
<td>0.10</td>
<td>0.33</td>
<td>0.66</td>
</tr>
<tr>
<td>CD Player</td>
<td>0.59</td>
<td>0.92</td>
<td>0.92</td>
</tr>
<tr>
<td>TV</td>
<td>0.45</td>
<td>0.49</td>
<td>0.95</td>
</tr>
<tr>
<td>Vehicle</td>
<td>0.05</td>
<td>0.20</td>
<td>0.22</td>
</tr>
<tr>
<td>Computer</td>
<td>0.01</td>
<td>0.01</td>
<td>0.01</td>
</tr>
<tr>
<td>Handicrafts</td>
<td>0.45</td>
<td>0.67</td>
<td>0.35</td>
</tr>
<tr>
<td>Jewellery</td>
<td>0.25</td>
<td>0.46</td>
<td>0.71</td>
</tr>
<tr>
<td>Land-line phone</td>
<td>0.07</td>
<td>0.20</td>
<td>0.47</td>
</tr>
<tr>
<td>Mobile</td>
<td>0.15</td>
<td>0.29</td>
<td>0.62</td>
</tr>
<tr>
<td>Sports equipment</td>
<td>0.02</td>
<td>0.01</td>
<td>0.14</td>
</tr>
<tr>
<td>Tiled floor</td>
<td>0.01</td>
<td>0.01</td>
<td>0.07</td>
</tr>
<tr>
<td>Low-quality floor</td>
<td>0.20</td>
<td>0.05</td>
<td>0.04</td>
</tr>
<tr>
<td>Electricity</td>
<td>0.58</td>
<td>0.89</td>
<td>0.99</td>
</tr>
<tr>
<td>Rooms</td>
<td>3.45</td>
<td>4.69</td>
<td>5.74</td>
</tr>
<tr>
<td>Own flush toilet</td>
<td>0.31</td>
<td>0.58</td>
<td>0.95</td>
</tr>
<tr>
<td>No flush toilet</td>
<td>0.61</td>
<td>0.31</td>
<td>0.01</td>
</tr>
<tr>
<td>Cement wall</td>
<td>0.13</td>
<td>0.13</td>
<td>0.36</td>
</tr>
<tr>
<td>Low-quality wall</td>
<td>0.66</td>
<td>0.07</td>
<td>0.29</td>
</tr>
<tr>
<td>No tap water</td>
<td>0.36</td>
<td>0.17</td>
<td>0.07</td>
</tr>
<tr>
<td>Average wealth index</td>
<td>-3.09</td>
<td>-0.23</td>
<td>1.40</td>
</tr>
</tbody>
</table>

As expected, the differences in the average wealth index for the three groups are smaller in Tonga (last row of unshaded columns in Table 3.27), where the average wealth index of the poorest is 1.32 points lower than for the middle and 2.68 lower than for the richest group. These findings reinforce the results from the previous section, which showed a more egalitarian income distribution (including remittances and internal transfers) in Tonga than in Fiji. Figure 3.14 compares the average wealth index for households that received remittances with those that did not. It should be noted that as previously detailed, a much larger proportion of Tongan households (with and without migrants) received remittances, in comparison with Fiji.
As Figure 3.14 shows, in both countries the average wealth index for households that received remittances was higher than for those that did not. The index for the remittance recipient households was 2.20 points higher in Fiji, and 2.77 in Tonga. Notwithstanding the usual caveats regarding the possibility of an endogeneity problem, these results point towards a positive relationship between remittances and households' long-term wealth.

SECTION 3.6 SUMMARY

This study provided many new insights into the effect of migration and remittances in Pacific island states.

The Survey: Comparing Fiji and Tonga

In particular, it found some important differences between Fiji and Tonga not only in relation to the levels of remittances received by households with migrant members abroad, but also for their distribution and spread through the rest of the economy, for their uses both as consumption support, and as a source of investible funds, particularly in relation to education. In addition, there were marked differences between the two major ethnic groups in Fiji.

Common to both countries is the critical, positive role that migration and remittances perform in relation to household saving, education, income distribution, and poverty alleviation. These main differences and similarities will be highlighted in the concluding remarks.

Remittances Received

Tonga has had a much longer history of remittance-oriented migration; over 90 percent of the surveyed households received remittances, in comparison with 43 percent of households in the Fiji sample. Moreover, it was found that a large number of households (broadly defined) without a migrant member had received remittances; and again, the incidence was much higher among Tongan households (80 percent) compared with Fiji (20 percent). Among remittance-receiving households the mean level of remittances received was also much higher among Tongan households US$3,067 in comparison with US$1,328 in Fiji (2004 calendar year). The sample data were then used to estimate aggregate remittances for the two countries: US$130.3 million for Fiji and US$67.3 million for Tonga, representing the equivalent of 6 percent and 42 percent of their respective GDP for 2004.
Forms and Channels Used

Although cash was the largest form of remittances transferred, over one-third of the Fiji sample and over 40 percent of the Tonga sample used informal channels for their cash transfers. The implication of these findings are (a) official estimates of remittances based on transfers through the formal banking system will grossly underestimate total remittances; and (b) policy measures designed to channel more remittances towards specific uses will need to address the question of the desirability and feasibility of targeting informal and non-cash transfers.

Migration, Remittances and Household Income

The analysis of remittances and income took due consideration of the complexity of the possible interrelationships between migration decisions, remittances, and income. It was found that migrant households were spread widely across all income groups, providing no evidence of the migration-hump thesis beyond relatively very low threshold income and asset ownership levels.

In terms of the combined effects of migration and remittances on overall household income, it was found that the impact of migration on remittances in the two countries differs significantly. In Tonga, remittances increase with the number of migrants per household whereas in Fiji the relationship is not statistically significant. This suggests that in Tonga remittances may be supply-determined, though multiple migrant households are more common in lower-income groups. This often represents sons and/or daughters remitting to aged parents. In Fiji, the absence of a strong relationship between the number of migrants in the household and levels of remittances received appears to arise from a combination of greater intensity of migration among relatively more affluent Indo-Fijian households and a rise in indigenous, single male migration to undertake high-earning, contract work in the Gulf States. Further research among the migrants themselves will be necessary to investigate these hypotheses further.

Other Findings About Migration, Remittances, and Household Income

The absence of the migrant household members appeared not to have a statistically significant impact on household total income from other sources (excluding remittances); but when income is decomposed it was found that, in Tonga, both the number of migrants away and the level of remittances received had positive effects on business income. This lends support to the argument advanced in much of the South Pacific migration literature that the organisation of family-based migration can be best understood as 'trans-national corporations of kin'.

In Fiji, remittances are associated with lower levels of household wage income, indicating that migration abroad is a substitute for domestic wage employment; but they possibly also have a negative effect on farm income, suggesting that receiving remittances causes the household to reduce its agricultural activities. However, unlike the case of the more mature migration-dependent economy of Tonga, there is no evidence that remittances also have a positive effect on business income. It is possible that these flow-through effects will become more evident over time, if Fijian households become increasingly reliant on migration and remittances. However, it should also be noted that in Fiji there is a strong positive relationship between remittances and cash saving (discussed below).

The results also indicate that there are significant differences between Indo-Fijians and Indigenous-Fijians, especially in relation to their propensities to remit. This result is consistent with the argument that the relatively more recent cohorts of Indigenous-Fijian migrants are motivated more by remittances, while Indo-Fijians are motivated more by political and social factors, thus tending to emigrate as permanent, family-based migrants. These explanations require further investigation through surveys of the migrants themselves.
Remittances and Saving

In Fiji, 79.3 percent of those who had received remittances had saved, in comparison with 61.5 percent of those who had not. In Tonga, where over 90 percent of households had received remittances, there is still a difference, albeit not as great, with 59.4 percent of those who received remittances having saved in comparison with 51.9 percent in the case of those who had not received remittances. A relatively higher proportion of Indigenous-Fijians in the lowest two quintiles had saved, and the mean levels of saving in these two groups were significantly higher than the levels for Indo-Fijians in the same income quintiles. This is consistent with the earlier observation that the Indigenous-Fijian households in the lower two quintiles received a much higher level of remittances than their Indo-Fijian counterparts. It would therefore seem that being in receipt of remittances at lower ends of the per capita income spectrum makes a significant difference to saving.

The econometric analysis investigated the impact of remittances on household saving. It was found that in both samples remittances had a strong impact on saving, especially among the Fiji sample, where the estimated marginal propensity to save from remittances among households was over 70 percent, while in Tonga, it was closer to 5 percent. One possible explanation for the extraordinarily high propensity in the Fiji sample could be that the high saving among lower-income households reflects 'target saving' among temporary contract migrants, mainly single male (Indigenous-Fijian migrants to the Gulf) where they remit almost their entire earnings for asset accumulation on their eventual return. While Tongans save much less, it is important to note that it was also found that remittances had a positive impact on Tongan households’ earnings from business activities, suggesting that rather than saving from remittances, these were being directed towards business investment. These explanations warrant further investigation as it could have important implications for policy in relation to both saving and investment in the recipient countries.

Remittances and Human Capital

The analysis focused on children’s schooling (ages 14 to 17) in the first instance. Primary and secondary education to age 14 in Tonga is compulsory and free. It is possibly for this reason that there was little variability in educational attainment of 14- to 17-year-old Tongans, and the econometric analysis indicated that migration and remittances effects were not evident. In Fiji, 8 years of education is financed by the government (i.e., up to age 14), but it is not compulsory. This probably explains why there is considerably more variation in the education attainment in the Fiji sample. The analysis showed household remittances are associated with better educational attainment among children ages 14 to 17, suggesting that it has an important role in alleviating the households’ budget constraint. The other clear results to emerge from the analysis was that children from Indigenous-Fijian and non-urban households are likely to have less years of education.

In the second part of the econometric analysis, the impact of the household’s migration-orientation on tertiary education for both Fiji and Tonga was assessed. It was found that in Fiji, having at least one household member intending to migrate in the near future increased significantly the likelihood of other household members having acquired tertiary education. The findings for Fiji are relevant from a policy perspective for they indicate that any potential negative brain-drain effects of migration could, to some extent, be countered by larger than otherwise commitment to and investment in education by migrant, remittance-receiving households. The reasons for the absence of a strong relationship in Tonga are not clear but could reflect higher rates of out-migration of Tongans to Australia and New Zealand under family reunion criteria where they are not assessed for skills. These explanations require further investigation through surveys of the migrants themselves.
Remittances, Income Distribution, Poverty and Wealth

Remittances perform a positive redistributive and social protection function, but the strength of the impact varies between countries and regions within countries. Remittances and other unrequited internal transfers have a strong positive impact on Tonga's income distribution where the poorest 40 percent of the population's share of cash income increases from 7.3 percent to 18.7 percent, and the richest 20 percent falls from almost 63 percent to less than 50 percent. For Fiji, the impact is also positive but weaker as one would expect with the poorest 40 percent share increasing from 9 percent to 11.6 percent, and the richest 20 percent falling from 57.8 percent to 53.8 percent.

By all three measures of relative deprivation used in this study, it was found that the population of Tonga suffers more deprivation than Fiji before taking account of remittances and other transfers. They also show that relative deprivation is worse among Fiji's rural population, but very similar for Tonga between the main and outer islands. Once remittances and transfers are taken into account, relative deprivation improves for both countries but with some important differences:

- Urban Fiji's deprivation is reduced by more than in the case of rural Fiji, and Tonga's relative deprivation on the main island is reduced considerably more than on the outer islands.
- Main island Tonga's relative deprivation is reduced to such an extent that with remittances and transfers their situation is better than in the case of both rural and urban Fiji.

In sum, remittances were found to have a positive effect on income distribution, particularly in urban areas. Remittances also contribute to increased saving, especially in Indigenous-Fijian households and to a lesser extent in Tongan households. The former effect appears to result from increased migration and remittances from this group due to contract work in the Gulf States. Although this development is evident in the data, it will be necessary to undertake separate surveys among the migrants themselves (possibly after their return home) to explore these relationships further. Migration and remittances were also found to have positive effects on income from business activities in Tonga, suggesting that while the impact on cash saving was not as strong as in Fiji, the evidence of a positive impact on business income is indicative of remittances stimulating business investment.

It was also found that inter-household income transfers in both countries were another important mechanism for reducing income inequality. Of particular importance was the finding that in both countries' households in the highest per capita income quintile made net transfers to other poorer households of such proportions that these effectively offset their income gains from remittances. This shows that to fully understand the income redistributive effects of remittances there is a need to consider not only the direct and indirect impacts of remittances on recipient household income, but also the effects of inter-household transfers associated with remittances. Apart from such inter-household transfers, it is important to take account also of the transfers sent to social organisations, such as churches, clubs, youth organisations, relief funds, etc., coming both from households in receipt of remittances and through direct transfers by the migrants to these organisations as is often the practice. To capture these additional flows and their effects, it is necessary to survey the migrants themselves, and possibly non-household institutions in the islands.
References


Notes

1. Those that exist were undertaken more than a decade ago and may no longer be valid (Brown, 1995; 1997; 1998a; 1998b). Furthermore, most previous empirical studies, including those cited above, suffer possible severe biases arising from self-selection among migrants and reverse causation in the relationships between remittances, income, and other variables of interest, such as saving and human capital. Recent research has emphasised the importance of adequately controlling for these influences in the econometric analysis given the possibility of estimation biases. (Ozden and Schiff, 2006; World Bank, 2006)

2. For a recent overview of migration and remittances in the South Pacific see Connell and Brown (2005) from which this section draws heavily.

3. In the remainder of this report where tables and figures show the Fiji sample by ethnic group, data are not reported for the ‘other’ ethnic group, given the extremely small size of this subsample. It follows that the sum of the Indo- and Indigenous-Fijian observations does not add up to the total for Fiji.

4. Across the entire sample (households with and without migrants), there were on average 0.9 migrants per Indo-Fijian household compared with only 0.4 per Indigenous-Fijian household.

5. The percentage for Tonga is considerably higher than the 75% found in their 2001 Household Income and Expenditure Survey. The most likely explanation for the difference is that the HIES used a rather general question about cash remittances only, while this questionnaire asks numerous questions with cross-checks to assist the respondent in recalling transfers that might not have been considered remittances, such as in-kind transfers, and bills paid on behalf of the household. The 91% figure is also very similar to what was observed in a similar survey over 12 years ago (Brown, 1995).

6. It should be born in mind that the Fiji sample was restricted to the main island of Viti Levu, and, given that the incidence of international migration from the smaller, and especially the outer-islands is likely to be lower, this estimate is most likely to biased upwards and needs to be treated with due caution.
7. For a good example of recent literature on the ‘new economics of migration’ see Ozden and Schiff (2006) based on the World Bank’s International Migration and Development Research Program. See also World Bank (2006), Ch. 5 for a useful discussion of the estimation issues involved.

8. It should be noted that this measure of per capita income is non-weighted, by household size nor adjusted by equivalence scales.

9. This follows very closely the methodology developed by Taylor, et al (2003) in their study of internal migration and remittances in China. This is discussed in more detail in Annex D.

10. Having observed previously that some households without migrants receive remittances and some households receive remittances both from migrant members and from non-migrant members, future work, beyond the scope of this study, will attempt to split the two sources of remittances and compare their effects on household income.

11. It is also likely that the impacts are different between the two main ethnic groups in Fiji, where Indo-Fijians are motivated more by political factors to move away from Fiji while Indigenous-Fijian migrants, especially the more recent cohorts, are motivated more to migrate for remittances. It was not possible to conduct the analysis for Fiji by ethnic groups due to the smaller numbers of households in some income source categories, which lead to considerable imprecision in the estimated results, but the negative, statistically significant coefficient on the Indo-Fijian dummy variable in both the total income and decomposed income equations is consistent with this interpretation. (See Annex D.)

12. This would then include all forms of cash saving, not exclusively precautionary saving.

13. It should be noted that the recorded amounts saved are effectively gross saving as the amounts given would need to be adjusted for any borrowing by the household during the same period.

14. Income is measured here exclusive of remittances.

15. It should be born in mind that these propensities refer to gross cash saving of all types.

16. However, it does not follow from this that without a migrant member a household cannot be a recipient of remittances. Our surveys revealed that many households that do not have a migrant member currently overseas receive remittances.


18. Similarly, the negative impact of brain-drain on an economy should not be examined in isolation of the potential gains in both remittances and human capital stemming directly from or induced by the increased opportunities for international migration as the possibilities for international mobility of labour are enhanced through globalisation.

19. It is conceivable that the Tongan data overestimate years of secondary education due to possible ambiguities in the translated version of the survey question, currently under further investigation. For this reason the Tongan data are not used in the econometric estimations.

20. An alternative measure often used for attainment is the expected years of education a child should have for that age. This is commonly identified in the development literature as ‘schooling for age’ or SAGE. If a child is attaining his/her expected education level he/she is identified by a
one and zero otherwise and this is used as the dependent variable. In this study a regression analysis using the SAGE variable was undertaken to test whether the presence of a migrant in the household influences the rate of educational progress of children in the migrant’s household. No statistically meaningful results were found, most probably because, in both countries, children at the primary level who perform poorly are not held back from promotion to the next grade.

21. Adams (2006), Barham and Boucher (1998) illustrate how building a counterfactual income scenario affects the results for income distribution and poverty. See also World Bank (2006, Chap 5) for a useful discussion of the various methodological issues involved in estimating these effects.


23. This estimator is not adjusted by adult equivalence scales.

24. This applies to all variables used (except rooms) which are dummies that take the value of 1 or 0.

25. This did not apply to the impact of remittances on saving among households in the top quintile, where it was also found that income from remittances was offset by inter-household transfers of income to lower-income households. This redistribution of their remittances possibly explains the absence of a strong positive (and possibly negative) relationship between remittances and saving for this income group.
CHAPTER 4. NEIGHBOURS: MAKING BILATERAL WORKER SCHEMES A WIN-WIN

Previous chapters in this report have pointed to the urgency of expanding job opportunities for the increasing numbers of youth in the Pacific, as well as the benefits of financial and 'social' remittances to the households of migrants. Previous discussion has also made the case for enhanced mobility of the non-elite sections of Pacific populations where permanent settlement using existing migration schemes in industrialised countries is largely irrelevant. For these reasons a study of the design of temporary seasonal worker arrangements has become important and timely.

SECTION 4.1 INTRODUCTION

This chapter attempts to provide some guidance on this issue by drawing on global experiences with seasonal labour programs in the context of a case study of Australian horticulture. The policy recommendations presented here should have broad applicability for bilateral negotiations on seasonal work between the Pacific and any other destination country — within or outside the region. This issue has become topical, and it is very likely that similar issues will occupy the attention of policymakers in the Pacific island states, as well as the industrialised countries in the Region and beyond.1

The chapter is divided into five sections following this introduction.

Section 4.2 looks at the labour needs of horticultural producers and their attitudes to bringing in temporary foreign labour.

Section 4.3 reviews various models for seasonal labour schemes in operation around the world and provides a close examination of Canada’s long-running Seasonal Agricultural Workers program to see what lessons it may hold for the industrialised nations and islands in the Pacific.

Section 4.4 models the wages, costs, tax obligations, and savings potential of Pacific islanders employed in horticultural jobs in Australia for periods of up to six months at a time to assess whether a scheme is potentially viable for both growers and migrant workers.

Section 4.5 discusses the challenges involved in finding an appropriate model for regulating a temporary labour scheme to achieve the twin objectives of fairness and efficiency.

Section 4.6 summarises the arguments and outlines the contours for a proposed model for Pacific islanders to work in irrigated horticulture in the Murray Valley.

SECTION 4.2 ASSESSING THE LABOUR NEEDS OF AUSTRALIAN HORTICULTURE

In the past two decades, Australian farmers have been increasingly exposed to international competition. Tariff protections, subsidies, price controls, and statutory marketing mechanisms have been largely dismantled by government, leaving Australian farmers to compete on an uneven playing field against their more highly protected counterparts in North America, Europe, and North Asia. While quarantine rules and the tyranny of distance provide some de facto protection for a limited range of crops in the domestic market, the Productivity Commission estimates that the 'effective rate
of assistance’ to Australian agriculture has fallen from 13 percent to 5 percent since the mid-1970s (Productivity Commission, 2005). In general Australian farmers have experienced unrelenting, long-term pressure to reduce costs, increase output, and become more export oriented. Overall they have met this challenge through innovation, including mechanisation. This has increased the efficiency of Australian farming, and productivity has grown more rapidly than most other sectors of the economy (Productivity Commission 2005). Over the period 1974-5 to 2003-04, total agricultural output increased by an annual average rate of 2.4 percent per year, even though inputs of both labour and capital declined (Productivity Commission, 2005).

As a result of these pressures, traditional family farms are increasingly giving way to industrial-style agriculture that can produce more efficiently through economies of scale. The number of farms in Australia declined by 25 percent over 20 years to 2002-03, and average farm size increased from 2,720 hectares to 3,340 hectares (Productivity Commission, 2005). More than half of Australia’s farm output is estimated to come from just 10 percent of rural enterprises, while the smallest 50 percent of farms generate only 10 percent of gross production (Productivity Commission, 2005).

The trend towards larger-scale corporate entities is also being accelerated by the growth of managed investment schemes, which provide a tax effective investment vehicle for urban-based, high-income earners, as well as attracting long-term investment from the burgeoning pension funds industry created by Australia’s compulsory superannuation scheme. These schemes were initially encouraged to increase investment in plantation timber (and overcome a perceived shortage of domestic pulpwood production); however, the same investment mechanisms are now being applied to farm products, such as cattle, olives, almonds, wine, and table grapes (Anderson, 2006).

In short, the romantic image of Australian family farmers making a living from their own block of land (epitomised by the soldier-settler farms created for returned servicemen after World War I) is increasingly giving way to a more prosaic reality of corporate investors, professional managers, and low-paid rural workers whose only connection to the land is that it supplies them with a job. Over the 20 years to 2003-4, the proportion of employees in the agricultural workforce has increased from 33 percent to 51 percent, while the combined share of employers, own-account, and contributing family workers has fallen from 67 percent to 49 percent (Productivity Commission, 2005).

The combination of these economic factors, together with long-term demographic changes underway in rural Australia (declining family size, urbanisation, and the ageing of the rural workforce), has led to growing labour shortages. In a national survey of 720 farmers carried out in 2003, more than 80 percent of respondents said that they found the task of sourcing farm staff difficult (Kondinin Group, 2005).

These shortages are most evident in horticulture where many crops are resistant to mechanisation (because of their tender, perishable, and highly seasonal nature), leaving production heavily dependent on low-skilled manual labour, particularly in peak seasons such as harvests.

There is considerable anecdotal reporting of the problems experienced by growers as a result of labour shortages (for example Colman and Korporaal, 2004; Shine 2005); and compliance raids by immigration officials on fields, orchards, and packing sheds to catch illegal workers have become a feature of the harvest period and a source of contention between growers and government (Grattan 2005; Marino 2005). The Victorian Parliament has acknowledged that ‘continuing labour shortages perpetuate the participation of illegal workers in rural industries’ (EDC); and union officials claim that ‘a significant proportion’ of Victoria’s fresh fruit crop is picked by undocumented workers who are highly vulnerable to exploitation and in some cases are offered wages as low as $3 per hour (Hughes and Schwartz, 2004).

Primary producers rely on both undocumented (illegal) and documented (legal) workers to meet
seasonal labour market needs. The undocumented workforce consists of unauthorised residents (primarily from Pacific island, Southeast Asian, and Chinese backgrounds); overseas students working in excess of permitted hours; Australians working while in receipt of benefits; and foreign travellers working without authorisation. The documented workforce includes itinerant farm labourers, family members, local casual workers, students, grey nomads (retirees travelling around Australia), and backpackers on the Working Holiday Maker (WHM) Scheme, which allows tourists ages 18 to 30 from certain countries to work in Australia for periods of up to 6 months with any one employer² (Harding and Webster, 2002).

In recent years, this latter category of working holiday makers (often referred to as backpackers) have emerged as an increasingly central component of the seasonal labour supply. A fruit grower on the Murray River in South Australia estimates that backpackers now make up 85 percent of his seasonal workforce (Sims), while a migration adviser in the same region says that the proportion of harvest labour performed by working holiday makers has grown from less than 10 percent in 2000 to more than 50 percent in 2005 ‘with some operations reporting a reliance of more than 90 percent on this labour source’ (Bennett, 2003). An orchardist in Victoria’s Goulburn Valley fruit grower estimates that 70 percent of his pickers were backpackers in 2004, and a tomato grower from the same region says his packing shed relies ‘totally on backpackers’ (EDC).

The number of working holiday-maker visas issued annually in Australia has doubled from 52,784 in 1996-97 to 104,350 in 2004-5 (Productivity Commission 2006); and in response to seasonal labour shortages in agriculture, government has created additional incentives for these travellers to take up jobs in rural industries.³ However despite the growing importance of working holiday makers to agriculture in Australia, primary producers do not regard them as an ideal solution to seasonal labour shortages. Growers complain of working holiday makers ‘drifting in an out’ of jobs (Sims 2006) as they prioritise personal travel plans over earning an income. One of the major drawbacks of backpacker labour is that each season brings a crop of novice pickers. Novice workers are less productive, require higher levels of supervision and are more accident prone; a proportion will simply find the work too arduous and give up before they become proficient. A major table grape grower from Mildura estimates that he could minimise the volume of rejected and wasted fruit by ‘sixty or seventy percent’ if he was able to retain the same workers—and their skills—season after season (Mares, 2006).

The problems associated with the undersupply or unreliability of labour in the Australian horticultural industry has resulted in massive amounts of direct and indirect losses (see Box 4.1). The gross value of horticultural production in Australia in 2002 was estimated by the industry to be AUD$9.65 billion dollars, and by the Australia Bureau of Statistics to be AUD$6.75 billion (HAL, 2004). However, after rapid growth in the late 1990s, the fruit and vegetable industry faces significant challenges:

- Internationally, the high Australian dollar (buoyed by booming resource industries) has significantly increased the price of Australian fruit and vegetables in international trade. Meanwhile, high tariff barriers restrict the penetration of Australian exports into major markets, particularly in Europe and Northeast Asia; while in more open economies, Australian produce must compete with exports from lower-wage countries, like China, South Africa, Brazil, and Chile.

- Domestically, supermarket duopoly; increasing concentration in the food processing sector; cheap imports of canned and frozen food (including subsidised European and low-wage Chinese produce); and rising input costs (like water, fuel, and fertiliser) have placed growers in the grip of a cost-price squeeze.

100
Box 4.1: Crop Loss Estimates Due to Labour Shortages in Australian Horticulture

Some estimates suggest a loss of national gross value product of at least AUD$700 million a year due to labour shortages in the horticulture industry across Australia. This is a rough approximation as the extent of losses is likely to vary significantly across the country (HAL, 2006). More specifically, in 2000 the Queensland Fruit and Vegetable Growers Association estimated that the shortage of casual rural workers had resulted in losses of approximately AUD$90 million, representing 10-20 percent of the gross value of production (National Harvest Trail Working Group, 2000). The Department of Business Industry and Resource Development (DBIRD) Projections estimated that economic losses incurred by the mango industry due to undersupply of labour, range between AUD$5.8 million and AUD$26.1 million depending on seasonal conditions. DBIRD further stated that shortages of labour can potentially limit future growth of the industry (Australian Mango Industry Association Ltd., 2006).

Certainty of labour supply is important to ensure timeliness in fruit-picking. Fruits that are not picked at the right times can be devalued at the marketplace, with requirements on the appearance of fruits becoming more stringent. This is especially challenging for crops that are susceptible to growth spurts, sunburn, or ripening. Fruits not picked in time can also damage the bush and harm future production (Bundaberg Program, 2006). Analysis reveals that the effect of labour supply uncertainty on the potential yield of citrus and tomato crops could contribute to a loss over the life of a citrus orchard of AUD$5778 per hectare and an expected loss of AUD$867 per hectare of a tomato orchard (HAL, 2006).

Various factors influence the undersupply or uncertainty of labour supply, including workers not turning up. Some packers had to close operations for several days, and some growers had to extend operations over a 7-day week to make up for labour shortages (Growcom, 2006; Australian Horticultural Exporters Association, 2006). Other factors include leaving on the job; it is not uncommon that backpackers leave in groups to pursue travel priorities, while some workers quit after a few hours as they were not able to stand the heat (Bundaberg Program, 2006), and unpredictable conditions or overlapping of seasons leading to competition for a limited pool of workers. Many growers have experienced losses due to the need to remove staff from other areas of production in order to harvest crops by the required time (Australian Horticultural Exporters Association, 2006). While the use of backpackers as labour has helped to fill some of the labour gaps, several issues have created costly consequences for growers. These include lack of quality control, lax in following required pruning procedures, lower productivity due to softness to heat, and higher cost of explaining health and workplace safety rights due to continual turnover of workers (Australian Horticultural Exporters Association, 2006).

As with other sectors of agriculture, these pressures are accelerating the trend away from family farms to large-scale corporate investment in horticulture. In addition, the rising price of irrigation water means that capital is moving out of some established rural industries (such as using flood irrigation to create pastures for dairy farming or raising fat lambs) and into intensively cultivated horticulture that employs computer-controlled drip irrigation targeted at the roots of trees to deliver a higher dollar return for a given quantity of water. It is estimated that ‘a litre of water poured onto an olive or almond tree can … generate up to 10 times the profit of the same amount poured into a cow’ (Strong, 2006; Mares, 2004). The pressure to increase the value of agricultural output per litre of water will only increase as water trading is extended across state boundaries and no longer restricted to primary producers.

New water-wise horticultural investment projects also cater to the growing consumer appetite for diversity (boutique products and new varieties) and quality (e.g., tree ripened rather than green-picked fruit) but bring in their wake a need for ever more careful handling of crops. Labour shortages in horticulture are expected to increase over time as farmers move out of commodities (e.g., beef and
sugar) into higher value but more labour-intensive crops (like fruits, nuts, and vegetables), including speciality produce (like lychees, durian, walnuts) (National Harvest Trail Working Group, 2000).

A market response to labour shortages would see farmers offer improved wages and conditions to entice workers back to their industry. Agricultural workers are the lowest paid workers in the economy, and their jobs are more likely to be casual and part-time than in most other sectors (Productivity Commission, 2005). However, the cost price squeeze and international competition described above inhibit primary producers from offering substantially improved pay and conditions especially as the booming and well-remunerated mining industry draws off labour in rural and remote Australia. As outlined above, the gaps in horticultural labour markets have largely been plugged by backpacker labour on working holiday-maker visas.

**Surveying Seasonal Labour Needs**

While the anecdotal evidence of labour shortages in horticulture is strong, there have been few if any attempts to evaluate the extent of that shortage. In an attempt to gain a better understanding of labour needs and attitudes to overseas workers, a survey of growers was carried out in the Swan Hill/Mildura area. The main aims were to assess the growers’ seasonal labour needs (if any), to gauge the extent and duration of labour shortages within the region, and to assess the growers’ attitudes to the idea of a seasonal labour program to bring in overseas workers.

The survey elicited a wide range of responses. While most growers expressed interest in a scheme to bring in seasonal workers from overseas, the individual responses varied from the extremely hostile to the wildly enthusiastic. Some of the growers display positive views towards overseas workers yet simply do not require their labour; others say that overseas workers are urgently needed but refuse to bear any of the costs of administering such a scheme. There is some correlation between the level of interest in employing overseas workers and the size of the enterprise and the type of crops grown, however personal attitudes also appear to be a major factor in distinguishing those who display interest in employing overseas workers from those who express negative views about such a proposal.

Respondents were asked a range of questions that sought to identify how well they were currently able to meet their seasonal labour needs. The answers reveal a mixed picture. As Figure 4.1 shows, about half of the respondents said that finding sufficient seasonal workers is ‘very easy’ or ‘fairly easy’, while the other half expressed the opposite view that securing adequate numbers of workers was ‘difficult’ or ‘impossible’.

*Figure 4.1: What is the Level of Ease in Finding Sufficient Seasonal Workers for your Enterprise?*

![Figure 4.1: What is the Level of Ease in Finding Sufficient Seasonal Workers for your Enterprise?](image)

When the question was posed in slightly different terms and in a less personal and direct manner, the evaluation of the local labour market tended to be slightly more negative (Figure 4.2). Only 40 percent
of respondents described the supply of seasonal workers as 'plentiful' or 'adequate' while 56 percent said it was 'inadequate' or 'extremely inadequate.'

![Figure 4.2: What is the Availability of Seasonal Horticultural Workers in Your Region?](image)

When asked if seasonal labour shortages had or were likely to prevent the expansion of their enterprise, the majority of respondents said ‘no’ (Figure 4.3). However, a sizeable minority, over one-third of growers, responded that labour shortages were restricting expansion or were likely to restrict expansion in future.

![Figure 4.3: Have Seasonal Labour Shortages Prevented the Expansion of Your Enterprise?](image)

Another indication of the difficulty of securing adequate numbers of seasonal workers came in the response of growers to a question about employing illegal immigrants. More than one in four growers (28 percent) admitted that they had to do this ‘sometimes’, ‘often’, or ‘always’. This is a surprisingly high proportion, and the actual rate of employment of illegal immigrants may be even higher, given that:

(a) it is conceivable that not all respondents who knowingly employ illegal immigrants would admit to the practice (even in an anonymous survey); and

(b) some survey respondents may employ illegal immigrants unwittingly (either via labour hire contractors or when unauthorised workers present false documents and tax file numbers).

These findings suggest that while there are labour shortages in the region, not everyone is experiencing shortages to the same degree. Nevertheless, half of the growers who responded to these
questions demonstrate a significant level of dissatisfaction with their current labour supply. This opens up the possibility that seasonal gaps in the horticultural labour market could be filled by temporary offshore workers.

**Attitudes to Offshore Labour**

To test growers' attitudes to the idea of an offshore labour program, respondents were asked if they would be interested in employing seasonal workers from overseas. Again, the responses revealed mixed opinions (Figure 4.4) with almost one-third (31 percent) of growers saying that they would 'never' be interested in employing seasonal workers from overseas.

**Figure 4.4: What is Your Level of Interest in Employing Overseas Workers?**

![Figure 4.4](image)

*Note. Totals may not add due to rounding.*

In unsolicited comments, some growers expressed strong disapproval of such a scheme, with several voicing the opinion that the unemployed should be encouraged (or forced) to do seasonal work before such a scheme is considered:

**Dried vine fruits grower:**
'I don't think overseas workers should be employed. There are enough workers on the dole.'

**Citrus grower:**
'I would not like to see workers imported.'

**Dried vine fruits grower:**
'We do not need bus loads of unemployed temporary foreign workers wandering around with little work available.'

**Table grape grower:**
'No Chinese slave labour.'

However, a majority (70 percent) of respondents did express interest in employing overseas workers on a seasonal basis. Over one-third or growers (36 percent) said they would be interested in some years. Another 14 percent said they would be interested in most years, while one in five (20 percent) said they would be interested in employing overseas workers every year. Once again, growers' unsolicited comments indicate that it is an issue that arouses considerable passion:

**Citrus grower:**
'An essential! Our industry relies completely on the current crop of illegal overseas workers (who have mostly just overstayed their visa's) to exist. Without them the crop would not get picked.'
Wine grape grower:
‘If it is needed I strongly agree to bring in seasonal workers from overseas as locals on the dole don’t work!!’

Citrus grower:
‘If people want to work let them come.’

Those growers expressing an interest in employing overseas workers were then asked follow-up questions about the potential number of overseas workers they could employ, the duration of the employment, what they might offer workers in terms of pay, accommodation and training, and what they might be willing to contribute to the cost of administering an offshore scheme. Figure 4.5 shows the total number of seasonal workers who are currently employed by survey respondents throughout the months of the year plotted against the number of overseas workers wanted in those months.

Specific tasks identified as requiring seasonal labour were bunch trimming, grafting, nursery work, leaf and shoot thinning, spraying, rack work, packing, planting and harvesting vegetables, flowers and seeds. There are three identifiable peaks in the engagement of seasonal labour:

Period 1 (January to March) coincides with the harvest of grapes and stone fruit;
Period 2 (June to August) coincides with the citrus harvest and vine and stone fruit pruning;
Period 3 (September to November) is an important time for thinning stone fruit and grapes.

Figure 4.5
Seasonal Workers Currently Employed and Seasonal Workers Wanted by Month

There is a concordance in the peaks and troughs of the first two plot lines—between current seasonal employment and the projected seasonal demand for overseas workers of all growers interested in an offshore scheme. In other words, growers’ projected need for additional workers corresponds to the actual seasonal variations in labour demand. This lends credibility to the survey results as an indication of industry needs: it suggests that responses were a considered response to seasonal variations in the operation of particular enterprises, rather than simply an ambit claim or ballpark
figure. The responses indicate that growers believe that in some years they could employ 30-50 percent more seasonal workers if such workers were available.

There is less obvious seasonal variation evident in the third plot line, showing the projected labour needs of only those one-in-five growers who expressed an interest in employing offshore seasonal workers every year. This suggests that there is a base-line of unfilled labour demand that exists throughout the year (albeit spread across different farms in different seasons) and indicates that there could be capacity for the region to absorb permanent migrants, as well as temporary seasonal workers, willing to perform horticultural labour. However, Australia’s current migration program has no provision for the migration of workers to perform agricultural work of this nature. In addition, it can be anticipated that foreign workers might well gravitate towards urban areas and better paying jobs once they were granted permanent residency in Australia, so that the labour shortage in horticulture would re-emerge.

When growers were invited to indicate their preferred region for sourcing overseas seasonal workers, the majority selected the option ‘any country, it doesn’t matter which one’. Nor is there any clear gender preference for overseas workers, with most growers saying that it did not matter whether workers were male or female or wanting a mix of male and female workers. Growers did not require that offshore workers would have extensive prior experience in horticulture with most indicating that employees could learn on the job. In general, workers’ attitude and fitness appeared to be the main consideration of employers.

As one grower commented:

‘As long as they work, I don’t care where they come from.’

Although survey respondents were not specifically asked about language skills, many volunteered that it would be desirable for overseas workers to speak at least some English. With the exception of one respondent, all growers indicated that they would pay offshore workers at or above the prevailing Australian award wage, and the majority expressed a willingness to attend a half-day information session about foreign workers’ culture and background.

Growers also expressed a clear preference for employing the same seasonal workers in each subsequent season. This emphasises the desire for labour reliability and skills retention, something which is not achieved through the employment of backpackers on working holiday-maker visas.

Sharing the Costs

The survey responses show that most growers hold broadly positive attitudes towards the idea of importing seasonal labour. However, when confronted with questions about sharing the costs of such a scheme, respondents exhibit less enthusiasm. The largest group of employers (39 percent) believed that all fixed costs (for such things as visas, health checks, and airfares) should be fully recovered from the workers’ wages, while 32 percent said that these costs should be shared between primary producers, workers, and retailers (Figure 4.6).
Moreover, the majority of growers (54 percent) said they would not be prepared to pay a levy to cover administrative costs of such a scheme while a further 28 percent said they would be willing to pay a maximum of only $10 per worker per week (Table 4.1).

<table>
<thead>
<tr>
<th>Levy You Would be Willing to Pay if Required</th>
<th>Number</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not prepared to pay a levy</td>
<td>57</td>
<td>54</td>
</tr>
<tr>
<td>Up to $10 per worker per week</td>
<td>30</td>
<td>28</td>
</tr>
<tr>
<td>Up to $20 per worker per week</td>
<td>15</td>
<td>14</td>
</tr>
<tr>
<td>Up to $50 per worker per week</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Other amount</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Total</td>
<td>106</td>
<td>100</td>
</tr>
</tbody>
</table>

The provision of reasonably priced, reasonable-quality accommodation for seasonal workers is already a major concern in the Mildura Swan Hill region, and such accommodation would be in much greater demand if seasonal workers were brought in from overseas. However, when growers were asked if they would be willing to provide onsite board and lodging to overseas workers, the overwhelming response (62 percent) was ‘no’ (Table 4.2).
Table 4.2 Would You be Willing to Provide Onsite Board and Lodging to Overseas Workers?

<table>
<thead>
<tr>
<th></th>
<th>Number</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>45</td>
<td>38</td>
</tr>
<tr>
<td>No</td>
<td>74</td>
<td>62</td>
</tr>
<tr>
<td>Total</td>
<td>119</td>
<td>100</td>
</tr>
</tbody>
</table>

The reluctance of the majority of respondents to share the inevitable costs involved in an offshore seasonal labour scheme merits further examination. On the one hand, it is unsurprising that farmers should express a preference for minimising their own out-of-pocket expenses, particularly in light of the fact that they are experiencing a long-term cost price squeeze (rising input costs and stagnant farm gate prices). On the other hand, the wording of some of the questions may have tended to magnify the negative response from some farmers. In the survey, respondents were asked whether they would be prepared 'to pay a levy' to pay for the administration of an offshore labour scheme. It became apparent that the word 'levy' has strong negative connotation for growers who feel themselves to be assailed by a plethora of imposts and charges imposed by government at various levels.

As one grower commented:

'I am sick of paying taxes, levies and the lot—don't even think about it or you'll start war!!'

**Major Investors**

The negative response to the question may also reflect the numerical bias towards small landholders in the survey sample (which is in turn reflective of the structure of the industry). However, the survey results indicated a correlation between the level of interest in employing overseas workers and farm size, and larger enterprises are likely to employ the largest numbers of foreign workers should a scheme be set up.

In light of these considerations and in response to feedback on the initial survey results received from stakeholders, additional interviews were conducted by telephone with the owners and/or managers of five major enterprises currently engaged in significant plantings of almonds, table grapes, stone fruit, wine grapes, and pistachios. Collectively the five projects were anticipated to account for a total of approximately 12,000 hectares under cultivation by 2010. Future labour needs were difficult to estimate and varied greatly between enterprises. For example, almonds are mechanically harvested requiring about 20 workers per 800 hectares of trees; whereas table grapes are hand-cut and very labour intensive, requiring a much higher number of workers at peak harvest. In broad terms, the managers of these enterprises anticipate that at the busiest times of the year, they will need to employ among them an additional 1,200 seasonal workers.

All five major investors acknowledged that securing a reliable labour supply in the future was a primary concern for their enterprise, and all expressed an interest in principal in gaining access to overseas workers if an offshore labour scheme was to become a reality. All respondents indicated a willingness to pay a levy to cover the administrative costs of such a scheme and to shoulder a proportion of the workers' travel costs, as long as certain conditions were met: (a) that the required work was performed to a satisfactory standard, and (b) that workers were available for a reasonable length of time.
As an illustration of these points, one farm manager commented:
‘If you asked me to pay an extra $500 to get a worker for just two weeks, I’d tell you to bugger off.
If it was three months, I’d look at it.’

Another farm manager put it this way:
‘The biggest disappointment with seasonal workers is that they leave after two days. If you can get
them to stay and then spread out the additional costs over a three-month period, then the figures
add up.’

And a third commented:
‘We’d look at anything depending on the feasibility.’

Discussion of Survey Results

Overall, the survey responses indicate that there is an identifiable shortage of available workers to
meet peak seasonal demands for labour in the horticultural industry along the Murray River between
Swan Hill and Mildura. The survey results show that a majority of horticultural producers are
interested in employing overseas workers on a temporary basis, with about one in five growers (20
percent) saying that they could offer seasonal jobs to overseas workers every year. While growers are
generally reluctant to shoulder the inevitable administrative and organisational costs of such a scheme,
the responses from the five major investors interviewed separately by telephone suggest that larger
operators appreciate that they would need to contribute to the administrative and practical costs of
importing workers and that this investment in a secure labour supply will ultimately pay dividends for
their business. A pilot scheme involving larger enterprises, which expressed a willingness to shoulder
a share of the costs, could well have a demonstration effect for other more reluctant growers.

However, before proceeding further with consideration of the proposal that growers’ labour needs can
best be met through the provision of foreign workers, two further questions arise.

If labour shortages are as severe as growers attest, then why is there continued investment to
expand the industry?

One reason is the comparatively long lead time between the establishment of an orchard or vineyard
and the achievement of harvest, which can create a lag between the decision to invest and the
emergence of a labour market problem. Another factor is the growth of Managed Investment Schemes
in horticulture. These schemes offer investors full tax-deductibility within the first 12 months, making
them attractive as a tax effective upfront investment and reducing the relative importance of the end
return on investment when harvest is finally achieved. The prospectus companies that manage and
promote these schemes can turn a profit on the provision of services at the front end (such as fencing,
planting, and the provision of irrigation), which can have the effect of disconnecting investment
decisions from the future market prospects for a given crop (Clarke, 2006). It should also be noted (as
indicated in Figure 4.3) that some growers are postponing investment due to labour market concerns.

Before turning to offshore labour, should one consider whether domestic labour supplies could
be mobilised instead?

Economic theory suggests that the labour problems in regional areas should be self-correcting; that the
labour shortage will eventually lift wages and conditions to a level where horticultural jobs once again
become attractive to potential workers. This theory ignores the cost price squeeze, structural and
demographic changes, and the competitive international forces outlined above, which constrain
growers options as far as wage rates and source of labour are concerned. It also fails to take account of
social and cultural factors, such as the changing role of women in the labour force, the attraction of the
urban centre as a place to live and work, and the changing industrial relations system in Australia.

The increasing prosperity of Australian society means that some former categories of potential
seasonal workers, such as school teachers and students, no longer see the need to devote their summer
holidays to supplementing their income. The growth of the service sector, particularly restaurants and
cafes, offer alternative and in many ways more attractive casual employment prospects than
agricultural labour. The physically demanding nature of agricultural labour; the separation from
friends, family, and familiar entertainment; and the temporary and uncertain nature of the work—rain
or hot weather can reduce the hours of work and hence income on any given day—all reduce the
incentive to leave the city to take seasonal jobs in horticulture.

As noted above, the survey revealed a division of opinion among growers about the extent to which
unemployed Australians should be compelled or encouraged to undertake seasonal work. Despite the
relatively low level of unemployment in Australia at the present time, there remain pockets of deep
disadvantage and entrenched long-term unemployment.

The simultaneous co-existence of long-term unemployment in some regions and pressing labour
shortages in others is evident in other industrialised nations apart from Australia. The provision of a
social safety net has probably reduced the pool of unemployed urban workers that might have been
encouraged or compelled to seek short-term seasonal work in regional areas. A high effective marginal
tax rate (through the loss of government benefits) also acts as a disincentive for unemployed workers
to take up casual jobs in horticulture, particularly where long distance travel and extended absence
from home is involved.

Seasonal agricultural work is often physically demanding and requires workers who are fit and mobile.
Many unemployed Australians will not necessarily meet these requirements:

- Age or physical disability may prevent them from undertaking such strenuous activity.
- The corrosive psychological effect of long-term unemployment may mean that they require
  intensive assistance to rejoin the workforce.
- They may not have access to transport or may be unable to spend long periods of time away from
  their primary residence because of family care duties (dependent children or elderly relatives) or
  study commitments.
- In addition, a proportion of those unemployed at any one time are over-qualified for agricultural
  labour and it is in their interests (and in the national interest in terms of the most efficient use of
  labour power) for them to pursue employment within their field of expertise (HAL, 2000).

A simple equation which attempts to solve labour shortages in regional and rural Australia by forcing
the unemployed into seasonal jobs is likely to fail. As Jordan and Duvell (2002) note, efforts to
‘activate’ the unemployed and welfare-dependent into jobs can involve considerable cost for limited
return, ‘especially when the claimant population shrinks to a residuum of seriously disadvantaged and
disabled people, and those with child care responsibilities.’

On the other hand, the fact that it can be difficult to facilitate the entry of the long-term unemployed
into the workforce should not deter us from innovative policy approaches. Cape York Partnerships
have initiated a program to bring young Indigenous workers from far north Queensland to pick fruit in
Victoria and South Australia (James, 2005). While small in scale, this project proved successful in its
early stages and is being expanded.

The initiator of the Cape York scheme (Milton James) has expressed concern that an offshore seasonal
labour program for horticulture could swamp his project. Such an outcome would be regrettable. However, the two ideas need not be mutually exclusive. What is evident is that if mobilising long-term unemployed and chronically disadvantaged Australians into seasonal agricultural work is to be a policy priority, then this will require intensive government intervention and assistance.

It is preferable that job vacancies should be filled by Australian residents where possible; and for this reason it is advisable that growers bear a significant proportion of the costs of any offshore scheme. In other words, growers should be required to pay a proportion of the offshore workers’ travel and other costs (in addition to the prevailing award wage) rather than recouping these expenses as deductions from wages. Growers should also be required to pay a flat fee that would go towards administrative costs (such as regulation and oversight of the scheme). These extra costs would act as a disincentive for growers to employ offshore labour when local workers were available.

The introduction of a large-scale, off-shore seasonal labour program is not recommended without first engaging interested growers in a series of small-scale pilot projects to further test the feasibility of bringing in overseas workers. The evaluation of such a pilot program would assist in determining whether an ongoing overseas seasonal workers scheme is desirable and, if so, could provide the basis for developing a realistic model for the administration, cost sharing, and regulation of any such scheme in the longer term. Such a pilot program could also have a demonstration effect, helping to educate sceptical Australian farmers as to the potential benefits to be gained from shouldering a share of the costs of bringing in offshore labour.

If such a pilot program proved successful and the scheme was expanded to Australian horticulture as a whole, then ‘back-of-the-envelope’ calculations based on the survey results suggest that on a national basis the industry has the potential over time to employ between 16,000 and 24,000 offshore seasonal workers in any one month of the year. An alternative calculation (based on a comparison of Australia’s horticultural industry with that of Ontario, Canada) suggests that Australian horticulture has the capacity to employ up to 38,000 offshore seasonal workers for an average period of four months each. (For explanation of how these scenarios were calculated, see Annex H).

As the following sections will indicate, while the apparent symmetry of such proposals is neat—Australia has jobs without workers, the Pacific island states have workers with no jobs—the devil of organising temporary labour migration schemes lies in the detail.

**SECTION 4.3**

**COMPARING SEASONAL AGRICULTURAL WORKERS PROGRAMS**

Since the beginning of the 1990s, there has been a ‘steady upward trend in inflows of seasonal workers’ around the world. For example, each year 500,000 seasonal workers from non-European Union (EU) countries are employed in EU agriculture, especially in Germany, which issued 260,000 seasonal work permits in 2001 (United Nations, 2004; Ratha, 2004). The United States relies heavily on seasonal agricultural workers from outside its borders, both undocumented workers and via the formal H-2A visa system. The United Kingdom has a Seasonal Agricultural Workers Scheme (SAWS) targeted at tertiary students from non-EU countries. Thai labourers toil in the fields of Israel, Moroccans tend the tomatoes in Spain, and Chinese workers pluck apples in Japan. In fact, Australia and New Zealand may be the only industrialised nations that do not import temporary labour for agriculture (Pickering and Barnes, 2005), and even here a significant proportion of seasonal work is carried out by working holiday makers, the backpackers referred to above. Table 4.3 provides an overview of four seasonal agricultural labour schemes: the United Kingdom’s SAWS, the United States’ H-2A, a Germany scheme, and the Canada’s Seasonal Agricultural Workers Program (CSWAP).
Table 4.3: Comparing Seasonal Agricultural Labour Schemes

<table>
<thead>
<tr>
<th>Schemes</th>
<th>UK SAWS</th>
<th>US H-2A</th>
<th>Germany</th>
<th>Canada SAWP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum stay</td>
<td>6 months</td>
<td>one year (can be extended twice)</td>
<td>3 months</td>
<td>8 months</td>
</tr>
<tr>
<td>Recruitment</td>
<td>At least 18-year-old full-time students from non-EU countries</td>
<td>No restriction on country of origin</td>
<td>12 bilateral agreements with Central and Eastern European countries</td>
<td>Bilateral agreements with Mexico and Caribbean</td>
</tr>
<tr>
<td>Workers tied to one employer?</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Who pays transport costs?</td>
<td>Worker</td>
<td>Employer (depends on length of contract)</td>
<td>Negotiable</td>
<td>Cost shared Roughly 50/50</td>
</tr>
<tr>
<td>Free housing?</td>
<td>Yes</td>
<td>Yes</td>
<td>No. Employers must provide 'adequate' housing at 'adequate' rental</td>
<td>Yes</td>
</tr>
<tr>
<td>Comments</td>
<td>High overstay rate between 4-10%</td>
<td>Many reported cases of abuse; recruitment by private sector labour hire companies</td>
<td>Mostly for agriculture but also hospitality and forestry</td>
<td>Overstay rate less than 1.5%. 85% of workers return to the same employer in subsequent years</td>
</tr>
</tbody>
</table>

Analysis of the schemes shows that overstay rates are not random or inexplicable, nor are they the result of nebulous ‘cultural’ factors relating to the originating country of workers. Rather, overstay rates reflect the structural characteristics of a given scheme. For example, the UK SAWS produces high overstay rates of between 4 and 10 percent (Home Office, 2002), where as overstay rates in the Canada’s SWAP are negligible. This is explicable when the structure of the two schemes are analysed. Under the UK SAWS, all travel costs are borne by the workers, which means that the fixed costs of entry to the United Kingdom are high and will take longer to recoup. The UK SAWS is targeted at tertiary students, which in theory should provide an incentive for participants to return to their home country at the end of the season in order to complete their education. Participants are also able to return to the United Kingdom for seasonal employment in subsequent years provided that they remain students, but the scheme is not designed with such circularity in mind. And after exiting the education system, participants in the scheme have no right of return to the United Kingdom, which increases the incentive to overstay after their final season. The workers hired under the scheme are relatively over-qualified and may find other employment options in the United Kingdom more attractive than returning home. These factors combined make high overstay rates entirely predictable. By comparison, the Canada’s SWAP has low overstay rates because it deliberately recruits low-skilled rural workers, reduces entry costs through a cost-sharing mechanism with employers, and holds out the expectation of a return to Canada in subsequent seasons.

It is worth noting that in relation to the United States’ H2-A scheme there has been anecdotal evidence of abuse—workers having to provide large up-front payments to recruiters in order to get accepted to
the scheme in the United States. Recruitment for the scheme is unregulated, with private sector labour hire organisations able to draw workers from any country in the world. This increases the level of competition to get a foothold in the scheme and makes it unsurprising that recruiters can extract large ‘deposits’ from workers.

Of the existing seasonal agricultural workers schemes overseas, the one operating in Canada appears to provide the most useful lessons for Australia, New Zealand, and the Pacific Region for several reasons. The Canadian scheme has been operating for almost four decades and has been subject to extensive study and critique. Canada is a traditional ‘immigration’ country with a legal and political system comparable to Australia and New Zealand. And the Canadian scheme began with the importation of labour from small island states in the Caribbean, providing a useful reference point for the Pacific.

**Brief History of the Canadian Scheme**

Canada’s Seasonal Agricultural Workers Program has been bringing seasonal agricultural workers to Canada from the Caribbean since 1966 and from Mexico since 1974. The scheme began in southwestern Ontario after years of lobbying by primary producers who had difficulty securing sufficient local labour to work their crops. There is a long history of labour shortages in rural Ontario, and a concomitant history of government programs to encourage or compel workers into the fields.

The so-called ‘Barnardo boys’ sent by Dr. Thomas Barnardo from British urban slums to Canadian family farms at the turn of the 19th century were ‘essentially apprenticeship indentures binding both parties to agreed conditions’ (Wall, 1992). During World War II, gaps in the agricultural labour market were filled using the conscripted labour of ‘German prisoners of war, Japanese Canadian internees, and conscientious objectors,’ as well as numerous voluntary ‘brigades’ of domestic labour made up variously of children living in rural areas, rural school teachers, men rejected for military service on medical grounds, and women from urban areas (Satzewich, 1991).

After 1945, Canada turned to Polish military veterans and refugees from war-ravaged Europe to work its crops. Both groups were admitted to Canada as migrants on the condition that they worked on farms for an initial period of one or two years. If they fulfilled this requirement, they would become eligible to apply for Canadian citizenship. However neither group provided a long-term solution to farm labour shortages: once the compulsory period of agricultural employment had been completed, the migrant workers quickly moved to jobs in urban areas with better pay and conditions (Satzewich, 1991).

In addition to foreign workers, concerted attempts were also made to mobilise internal reserves of labour for agriculture:

...between 1943 and 1966, at different times and with varying degrees of success, the Canadian state and employers have attempted to mobilise temporarily unemployed farm workers by paying for their transportation costs from their place of residence to the harvest. They also attempted to mobilise the urban unemployed ... children between the ages of 10 and 16 with the assistance of the YWCA and YMCA, female household workers, military personnel, aboriginal peoples, high school students, and patients from psychiatric hospitals (Satzewich, 1991, p 69).

However during the post-WWII period, agriculture was competing for workers with other rapidly expanding sectors of the economy (such as industry and construction) which offered better pay and conditions closer to urban centres. Farmers remained dissatisfied with the quantity and quality of the Canadian workers mobilised on their behalf by the Department of Labour. In a report to government, farmers lamented that many of the recruits had ‘never been on a farm before,’ were ‘not physically
able to perform the tasks required,’ and lacked ‘experience and dexterity.’ The report went on to complain about the moral probity of the workers, saying there were many ‘drunks, half-drunks and winos, who only work enough to get the price of a couple of bottles of wine’ (Basok, 2002).

While the Canadian state was attempting to solve its rural labour shortage, the island states of the Caribbean were already looking to Canada to help solve the opposite problem—excess labour. As early as 1947, Jamaica and Barbados began lobbying for migrant workers from their countries to be allowed to work in Canadian agriculture (Smart, 1997). Art Smith, chief executive officer of the Ontario Fruit and Vegetable Growers Association, says a scheme to import Caribbean labour finally got off the ground after his late father, fruit-grower Harold Smith, took a vacation in Jamaica:

I remember as a kid him coming home and talking about all these people standing there with nothing to do and we were 2,500 miles away, maybe less than that, and we had all sorts of opportunities and not the people to fill the jobs; they had the people without the jobs, so it was a marriage made in heaven at that point (Smith, 2005).

With the backing of other growers, including Eugene Whelan, a Liberal MP who later became Agriculture Minister (Basok, 2002), Harold Smith convinced the government to grant growers’ permission to bring in 264 farm workers from Jamaica to assist with the harvest (Cecil and Banks, 1991). The Canadian Seasonal Agricultural Workers Program was born.

In its initial years, the CSAWP faced stiff political resistance due to persistent levels of high unemployment in Canada and perceptions that the Caribbean workers were taking jobs from locals (Smith, 2005). In time, however, the scheme gained political acceptance, and soon the number of offshore workers coming to Canada grew. The scheme was expanded from Jamaica to include other island nations in the Caribbean; and in 1974 Canada signed a seasonal labour agreement with Mexico. By 1987, there were 6,124 foreign agricultural workers coming to Canada each year (80 percent from the Caribbean, 20 percent from Mexico); and the size of the scheme almost doubled over the next two years. Through most of the 1990s, numbers remained fairly stable at around 11,000-12,000 workers per year although the balance gradually shifted more in favour of Mexico as a source country. In 1998, when 12,170 foreign seasonal workers were brought to Canada, 43 percent came from Mexico and 57 percent from Caribbean countries (Basok, 2002). In subsequent years, the scheme once again experienced rapid growth, and the numbers coming to Canada each year now approached 20,000. While 85 percent of those workers still go to Ontario,11 the use of offshore seasonal workers is now expanding into other provinces, such as British Columbia, Manitoba, and Alberta.

Over time, CSAWP has become a core feature of Canada’s rural economy, such that industry figures now insist that horticulture would not survive without it:

If we did not have that program, they would not be on the farm, there would be no labour force on the farm, there would be no horticulture industry in Canada (Smith, 2005).

Operation of the Canadian Scheme

Initially CSAWP was administered by the government via its then Department of Manpower and Immigration. In 1987 after a government review, responsibility for the scheme was handed over to the private sector, and the Foreign Agricultural Resources Management Service (FARMS) was established.12 FARMS is a non-profit, private sector agency governed by a board appointed from (and by) horticultural commodity groups (such as the Ontario Fruit and Vegetable Growers Association). FARMS is completely self-financing and operates without public subsidy under the authorisation of a federal government ministry, Human Resources Skills Development Canada (HRDC).13
In theory, farmers need approval from local HRDC employment centres to certify that no Canadian workers are available to fill the jobs. However, after the first year of involvement in the scheme, such approval is perfunctory. In practice, farmers notify HRDC of the number of foreign workers they wish to employ at least 8 weeks prior to the start of work. HRDC approves the labour request and sends the information on to FARMS, which then determines how many workers are needed and sends that information to government liaison officers from the Caribbean and Mexico. The liaison officers transmit the information to the Labour Ministry in their home country and details are sent to the Canadian consular officials in the relevant capital (Kingston and Mexico City).

Workers are selected from a pool of applicants who are ‘pre-medicaled’ and readily available to leave for Canada. The Canadian government authorises ‘designated medical practitioners’ to carry out the health checks. The primary concern is active TB. No HIV testing is done for people staying less than 9 months in Canada. If a returning worker has been back in their homeland for less than 6 months after returning from Canada, then they do not need to repeat the medical.

FARMS charges employers an administration fee of C$35 (+ goods and services tax) per worker. The same charge is applied if a worker is transferred between employers within Canada. The workers’ travel from their home country to Canada is organised through CanAg travel services, which is a subsidiary of FARMS. International travel is paid in advance by farmers, with around 40 percent of this cost later recouped via deductions from workers’ wages. Farmers also pay for the visa up front (C$150 per worker), and this amount can be fully recouped through wage deductions. However, in recovering costs from workers, farmers can deduct a maximum of 5 percent of gross earnings per pay period (in the case of Mexican workers) or C$3.50 per day (for Caribbean workers).

Canadian employers are responsible for all domestic travel from the workers’ point of arrival in Canada to their place of work and must provide the migrant workers with free housing (including meals or cooking facilities) for the duration of their employment. They must guarantee each worker a minimum of 240 hours work over six weeks at or above prevailing minimum wage rates (C$8 per hour for fruit picking in 2005). Employers must also take out workers compensation insurance to cover the migrants in the case of industrial accidents.

Farmers can specify the country or region from which they want to employ workers (i.e., Mexico or Caribbean) and can request particular workers by name. In fact, the majority of workers (around 80 percent) are ‘named’ in this way, having already spent at least one season in Canada and been asked by their employer to return the following year. The vast majority of workers are men, although in recent years a small number of women have also come to Canada under the scheme.

Migrant workers enjoy the same tax free threshold as Canadian residents (C$15,000 per annum for a married worker) but must contribute to mandated insurance and pension schemes:

- Workers are covered by the universal health care system while working in Canada and, where required, pay the relevant contributions to provincially based schemes.
- Workers make pension fund contributions and can access their accumulated entitlements and transfer them to their home country after reaching retirement age.
- Workers pay employment insurance but cannot claim unemployment benefits in Canada.

Seasonal agricultural workers come to Canada for an average of 4-months employment. The maximum stay allowable under the scheme is 8 months. Workers must be prepared to work long hours (11-12 hour days are not uncommon) for a 6-day week, and there is no provision for overtime pay or penalty rates. Each worker is tied to a designated employer and must leave Canada at the end of the labour contract. (All CSAWP visas expire on December 15th each year).
Benefits of the Canadian Scheme

A major study of CSAWP as a ‘model of best practice and migrant worker participation in the benefits of economic globalisation’ was undertaken by the North South Institute in Canada (Preibisch, 2004a; Griffith, 2004; Downes and Odle-Worrell, 2004). This study and other research, particularly by Basok (2003; 2000a), suggest that CSAWP has benefits at a number of levels (for Canadian growers and Canadian rural communities):

- CSAWP increases labour reliability at times of peak demand and enables growers to plan production increases with greater confidence. In Ontario, where most offshore workers are employed, horticultural output expanded 90 percent between 1994 and 2000 (Ferguson, 2004a).
- Growers build up a skilled labour force with the same workers returning each year, thus improving productivity and quality and reducing industrial accidents and crop spoilage.
- Seasonal employment of foreign workers maintains and expands employment in higher-skilled jobs through the expansion of associated rural industries, such as transport services, construction, and food processing. FARMS estimates that 15,000 offshore seasonal workers coming to Ontario each year generate 84,000 direct jobs and 63,000 indirect jobs within the province. Basok estimates that each horticultural farm worker supports 2.6 jobs in the supply and processing sectors. (Basok, 2002).
- Local spending by seasonal migrant workers provides an economic boost to Canadian country towns and helps to sustain local businesses (e.g., shops) and services (e.g., banks, post offices) that may otherwise be in danger of closing.
- The scheme offers a legal route to farm jobs that would probably otherwise be filled by undocumented workers. Growers need not fear being in breach of the law or suffering the disruption of immigration raids.

There are benefits for migrant workers as well:

- CSAWP provides opportunities for unemployed and underemployed Mexican and Caribbean workers to earn income at pay rates well above those on offer in their home countries.
- Workers return home each year and can use their savings and remittances to improve housing, nutrition, clothing, and health care for their families. Workers and their families enjoy greater income security and increased access to consumer goods.
- The scheme has long-term development outcomes in source countries; in particular, the children of migrant labourers are likely to stay longer in school. Jamaican workers were found to spend up to 35 percent of remittances on children’s education (Russell, 2004), and there was a positive correlation between the number of years workers are employed in CSAWP and their children’s school leaving age (Verduzco and Lozano, 2004). This finding is consistent with other surveys on the high proportion of migrant workers remittances used to fund spending on children’s education (United Nations, 2004).
- Workers are spared the smugglers’ fees and risky journeys required to enter North America without the appropriate papers, and can live free of the corrosive fear that they may be discovered working illegally. Unlike undocumented workers, they return home regularly and are not forced to endure long years of separation from loved ones.
- The scheme is more accessible to the very poor in the source countries, those who do not have the financial resources required to pay the guides or bribes required to engage in cross-border travel as undocumented migrants.
The scheme creates mechanisms (at least on paper) to protect the rights of foreign workers in terms of wages, health and safety, and regulated work hours—protections that are completely denied to undocumented workers.

For the Canadian, Mexican, and Caribbean governments, there are benefits:

- CSAWP has ‘more or less eradicated the employment of undocumented workers in agriculture’ in Canada.\(^{19}\)

- The circular nature of the scheme (with workers returning to Canada in subsequent years) results in low overstay rates by reducing the incentive for workers to ‘disappear’ into the community at the end of the contract (Basok, 2000b).

- Recruitment of seasonal workers can be targeted at impoverished regions, the unemployed, and the landless, thus ensuring greater equity and spreading the developmental benefits of the scheme to priority areas.\(^{20}\)

- Sending governments have the capacity to monitor and protect the rights of their migrant citizens.

Problems with the Canadian scheme

The Canadian scheme is not without its problems however. The United Food and Commercial Workers (UFCW) union in Canada says the exploitation of migrant workers under CSAWP is ‘Canada's shameful little secret’ (UFCW, 2002), and one researcher refers to it as ‘a revolving door of exploitation’ (Sharma, 2001). There have been protests and strikes by migrant workers, cases of abuse and exploitation, examples of sub-standard or overcrowded accommodations, and industrial accidents due to insufficient training, inadequate safety equipment, or overlong working hours (for examples, see Martin, 2003; Basok, 2002; Ferguson, 2004a; Lee, 2003).

In October 2005, 32 Mexican blueberry harvesters walked off a farm in British Colombia. For 3 months they had lived in unheated construction trailers and cooked on outside propane stoves, and with 44 pickers sharing a single washing machine and no clothes dryer. They had put up with these conditions while earning C$8.30 per hour picking blueberries, but when the summer ended the workers were moved on to picking mandarins at piece-rates. They claim they were earning just C$24 for a 10-hour day (Woodward, 2005).

In Ontario, where most migrants are employed, agricultural workers are effectively prevented from organising in trade unions (although this is currently subject to legal challenge) and are not covered by workplace health and safety legislation. A belated move to incorporate agriculture into the provincial Occupational Health and Safety Act from June 2006 (Canadian Government, 2005) appears to be more form than substance, since employers will be subject only to ‘voluntary guidelines’, rather than the legally enforceable ‘sector regulations’ that apply to other industries and set down specific rules for workplace safety in particular circumstances.\(^{21}\) Labour activists argue that without enforceable regulations, it is very difficult for agricultural workers to resist pressure to perform work in unsafe conditions.

A distinctive feature of the Canadian scheme is that it operates under umbrella of bilateral (government to government) agreements, which provide for annual review. This means that problems and inadequacies in the scheme can be addressed, and contracts and regulations updated. The agreements also provide a formal mechanism (consular liaison officers) for workers to raise grievances through their diplomatic mission. However, there is also a downside here: the consular liaison officers are seen to be too remote from the workers and to suffer from a conflict of interest—maintaining good relations with Canada and the smooth operation of the scheme versus taking up the fight on behalf of individual workers.

117
As one former contract worker from Mexico puts it, a complaint to a consular official ‘enters in one ear and goes out the other and he doesn’t do anything’ (Maldonado, 2005). Preibisch argues that genuine representation is compromised by consular officials’ obligation to maintain their country’s ‘market share’ in the Canadian program: ‘When employers are displeased with the behaviour of either their workers or the supply country representatives, they have the option of switching countries’ (Preibisch, 2004b). Union organiser Stan Raper agrees and says that it is simpler for consular officials to replace workers who raise concerns in the workplace than to address the root cause of their complaints (Raper, 2005).

The documentary film El Contrato offers evidence to support this view in a scene depicting a meeting between Mexican consular officials and workers at a greenhouse. The workers were upset because a supervisor had grabbed one of them by the throat. The response from the Mexican officials was to tell the workers that the incident was ‘a misunderstanding’ and to urge them to ‘stay away’ if they see such things happen so that there will not be further trouble. ‘We need your cooperation to make things run smoothly’ they tell the workers (Lee, 2003).

But while workers and trade unions see the regulation of the scheme as inadequate, government officials in Canada and Mexico express a degree of frustration at the considerable amount of bureaucratic effort required by a program that employs relatively small numbers of people. Mexico’s response to this problem would be to dramatically expand the scale of the bilateral scheme and extend it to other industries. Within the Canadian government on the other hand, there appears to be a preference for moving to a more laissez-faire system in which the private sector is given a free hand to recruit labour from whatever country it chooses.

A positive feature of the Canadian scheme is that it provides continuity. Growers can request the same workers back each year, which means that they retain the skills that workers have built up and do not need to invest constantly in retraining. This can also be a plus for the migrant workers as they become familiar with their employer, their work, the local community, and each other. Despite this positive aspect, the system has distinct disadvantages for workers since they are essentially bonded to a particular employer for the duration of their stay in Canada. They enjoy neither mobility within the labour market nor geographic mobility within Canada. As Nandita Sharma from York University puts it, migrant workers are ‘indentured to their employers’ and ‘forced to accept conditions that are seen as unacceptable to those with the legal rights to be ‘free’ in Canada’ (Sharma, 2006).

Employers have an almost absolute power to send migrant workers home before their contracts expire on the basis of ‘noncompliance, refusal to work, or any other sufficient reason’ (UFCW, 2003; emphasis added). Workers cannot transfer to a different employer unless the employer initiates the request and gains approval from Canadian government officials. Workers can thus be trapped in exploitative or abusive situations and have very little power to refuse unreasonable demands, such as working excessive hours or in unsafe conditions.

In this sense, migrant workers are ‘unfree’ (Satzewich, 1991). Basok argues this characteristic is more important than other factors (such as a willingness to accept low wages) in making them particularly attractive to employers. Unlike Canadian workers, who ‘are not willing to be chained to the job,’ seasonal migrants are removed from their social and familial context. They do not have ‘family obligations, church commitments, friendship ties and personal needs that require them to take time off work’ and can be relied on to do the picking ‘when the produce is ripe’ (Basok, 2003).

Another feature of the Canadian scheme that has advantages and drawbacks is the requirement that farmers provide free accommodation for overseas workers. The advantage here is obvious—it allows workers to reduce their living costs and maximise their savings and remittances to family members at home. However, since the provision of accommodation becomes part of the farmers’ cost of production, this creates an incentive for employers to cut corners. A lax inspection regime has resulted
in numerous cases of substandard housing. Smart reports workers living in accommodations where 'broken windows ...were never fixed ...makeshift bunk-beds were set up in the basement in the same room where a substandard shower stall was placed ... [t]he floor was rough and damp ... and kitchen facilities could hardly accommodate the cooking needs of nine people who all cooked their own meals' (Smart, 1997).

Similarly, workplace health and safety specialist Mark Parent (2005) describes workers living in a dark cement basement with no electric lighting:

> The only light they had was through the window, which was a very shallow one-foot deep window that had a window well and it happened to be located on the farther side of the sun ... So any light they had was with candles. Their running water was a hose that ran from the outside of the building and down through that window and they had made a little makeshift kitchen.

Parent says that the workers were reduced to using the basement sump pump as a toilet. The trade union UFCW Canada alleges that some farmers have housed workers in accommodation ‘directly attached to or located directly over greenhouses’ creating obvious dangers to workers health from living in buildings housing chemicals, fertilisers, herbicides, and industrial equipment:

> During the 2003 growing season in the Leamington area, two workers were housed in the boiler area of a greenhouse. The boilers malfunctioned, causing a fire. The workers were away from the living quarters at the time of the fire, but all of their clothing and possessions—including passports and other documents—were completely destroyed by the fire. It was near the end of the season, and these workers returned home with just the clothes on their backs (UFCW, 2004).

A less obvious problem associated with the provision of on-site accommodation by farmers is that it ‘gives employers an opportunity to control farm worker’s behaviour’ both on and off the job (Wall, 1992). Preibisch notes that the ‘significant physical distance between farms’ in rural Canada ‘separates workers from their compatriots and reduces social interactions between migrant workers and the community.’ While farmers have no legal power to restrict workers movements off farms during off-work hours ‘some employers prohibited workers from leaving the property.’ The workers’ capacity to travel into town to socialise or shop thus ‘depends ultimately on the subjective goodwill or the individual employer’ (Preibisch, 2004).

While many employers treat workers well, the structure of the CSAWP fosters relations between employer and employee that can be characterised as ‘paternalistic and inequitable’ (Wall, 1992).

**Overstaying in the Canadian Scheme**

A frequent objection to the idea of seasonal labour programs in Australia and New Zealand is the fear that temporary workers will overstay their visas and ‘disappear’ into the community (adding to the stock of undocumented migrants). The Canadian experience suggests that this fear is greatly exaggerated. Of the 15,123 workers who entered Ontario under CSAWP in 2004, only 221 (or less than 1.5 percent) were listed as going AWOL (absent from their jobs without leave), and some of these could have returned to their homeland early (perhaps due to homesickness or for other personal reasons). All workers were reported to have left Canada and returned home by the end of the year.\(^{24}\) Initially, the low overstay rate in the Canada scheme was engineered through recruitment criteria that were skewed to select those seasonal workers deemed most likely to return to their homeland—that is, male workers who were married with children still at home (Basok, 2000b). Recently, however, the scheme has also been opened up to single men and to women.
The most important factor in the low overstay rates in the Canadian scheme appears to be that workers can return to their homeland with the expectation that they will be re-engaged to work in Canada under CSAWP the following year. This 'partly explains the lower number of overstayers compared with those in other similar programs' in other countries (United Nations, 2004).

SECTION 4.4
MODELLING WORKERS’ SAVINGS AND THE COST TO GROWERS

Any proposed seasonal labour scheme will only be viable if the numbers stack up. In other words, during a limited period of employment in Australia, Pacific island workers must be able to make savings that are significantly greater than they could hope to amass in their homeland, and growers must be able to meet their seasonal labour needs without incurring excessive additional costs. While the establishment of such a scheme may well require some initial seed capital from government, the basic operation should become self-financing over time.

Agricultural Wages in Pacific Island Nations

Any modelling of workers' potential savings must take into account their potential earning capacity in their homeland. The quality of statistics on wage rates in Pacific island countries vary, but available data shows that unskilled agricultural workers from the Pacific (the target group for recruitment) could achieve significant increases in their annual income by working overseas for even a few months of each year. For example:

- The minimum wage for unskilled adult workers in Papua New Guinea as of 2005 is 150 Kina (US$52) per month.
- The minimum wage in Vanuatu is 20,000 vatu (US$186) per month, raised in September 2005 from 16,000 Vatu (US$149) per month.
- According to the latest available figures, the daily mean wage for agricultural workers in Fiji was FJD$16.77 (US$9.50) in 1999.25

This compares to the award rate of AUD$15.38 (US$11.38) per hour as applicable in Australia under the federal horticultural award as at July 2005.26 (This amount includes a built in loading of 25 percent to compensate casual workers for the absence of entitlements, such as holidays and sick leave that would be available to permanent workers.) In short, Pacific island agricultural workers could gross the equivalent of their entire monthly income with just a few days work in Australia.

However, in order to properly calculate the savings potential for Pacific island seasonal workers, it is also necessary to look at the tax treatment of their earnings and at the costs of working and living in Australia.

Tax Treatment of Foreign Workers in Australia

Under prevailing Australian taxation arrangements, all Australian citizens and permanent residents enjoy an annual tax free threshold of AUD$6000—no tax is payable on earnings below this amount. In addition, in an effort to encourage workers to take up jobs in agriculture, seasonal workers engaged in harvest labour enjoy a discounted tax rate of a flat 13 percent for each dollar earned. This compares to the standard 17 percent tax rate on all earnings between AUD$6001 and AUD$21,600, and the 30 percent tax rate on earnings between AUD$21,601 and AUD$58,000.27 By contrast a foreign worker who is considered a ‘non-resident’ for tax purposes,28 does not benefit from the tax-free threshold of AUD$6000 and pays a flat rate of 29 percent tax on every dollar earned.29

This raises some obvious problems for the operation of any scheme to employ Pacific islanders in seasonal work in Australian horticulture. First, there are equity issues: Pacific islanders would be
contributing almost one-third of their earnings in tax to the Australian government but would be ineligible to access most government services. (In addition of course, Pacific islanders would be paying a 10 percent government services tax on all their purchases of goods and services in Australia). They would be working alongside Australian residents who enjoy much more favourable tax treatment. Second, a 29 percent tax rate with no threshold seriously erodes the potential of Pacific island workers to make significant savings. It is instructive to compare the current Australian tax treatment of non-residents with the taxation of Caribbean and Mexican workers under CSWAP—seasonal migrant worker who is married can earn up to C$15,000 before paying Canadian income tax (although they must still pay unemployment insurance and make pension contributions).

The National Farmers Federation is campaigning to have the discounted tax rate for seasonal agricultural work extended to Working Holiday Makers (National Farmers Federation, 2005). As will become apparent, the modelling below suggests that such tax treatment would be a prerequisite for the viability of a seasonal labour program for Pacific islanders to work in Australian horticulture. It also suggests that Pacific island workers should be guaranteed a minimum of 13 weeks employment at 40 hours per week.

The modelling assumes that Pacific island workers would pay the Medicare contribution of 2.5 percent of gross earnings and would have the same access as Australian residents and citizens to the universal healthcare system while working in Australia.

**Costs for Pacific Island Workers Employed in Australia**

The savings potential of Pacific island workers engaged in seasonal horticultural jobs in Australia is contingent on their cost of living and on the proportion of fixed costs (of travel, etc.) that they are expected to bear.

For reasons which are explained more fully below, it is assumed that Pacific island workers will pay for off-farm accommodation in Australia, rather than being housed by their employers. Accommodation costs are estimated at AUD$115 per week, based on the rates currently charged to working holiday makers and itinerant Australian workers staying in backpacker lodges and caravan parks in the horticultural districts of north-west Victoria. Allowance for living costs (food, entertainment, phone calls, etc.) is estimated at AUD$25 per day. No allowance has been made for daily work-related travel costs on the assumption that travel to and from site will be provided by the employer or the accommodation provider (as is frequently the case for working holiday makers).

Total fixed costs for international travel to and from Australia (including airfares, visa fees, health checks, and incidentals) is approximated at AUD$1,672. (For a full break down of cost assumptions and savings calculations, see Annex I).

In attempting to assess the savings potential of Pacific island workers, two different scenarios are modelled in relation to taxation. Under the high tax scenario, the existing tax rules for non-residents (29 percent flat rate) are applied. Under the low tax scenario, the discounted Australian resident tax rate of 13 percent for seasonal work is applied. In both scenarios, workers also pay the Medicare levy of 2.5 percent. In both cases, it is assumed that the tax-free threshold of AUD$6000 does not apply.

The assumed living costs of Pacific islanders working in Australia remain constant under all scenarios. However 3 different options for sharing the fixed costs of travel to and from Australia are considered. Under option 1, all fixed costs are paid by the workers; under option 2, costs are split equally between workers and employers; under option 3, employers bear the full costs of workers travel.
Also modelled are two different options for weekly working hours, with scenarios based on both a standard 40-hour week and on the longer 50-hour week often demanded by the nature of seasonal harvest work.

Table 4.4 is a summary of the savings potential of Pacific islander workers using these different assumptions for taxation, cost sharing, and working hours.

<table>
<thead>
<tr>
<th>Scenario</th>
<th>Weekly hours</th>
<th>Tax rate</th>
<th>Workers’ share of fixed costs</th>
<th>AUD$</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>#</td>
<td>%</td>
<td>%</td>
<td>6 weeks</td>
</tr>
<tr>
<td>1</td>
<td>40</td>
<td>29</td>
<td>100</td>
<td>(884)</td>
</tr>
<tr>
<td>2</td>
<td>40</td>
<td>29</td>
<td>50</td>
<td>(48)</td>
</tr>
<tr>
<td>3</td>
<td>40</td>
<td>29</td>
<td>0</td>
<td>788</td>
</tr>
<tr>
<td>4</td>
<td>50</td>
<td>29</td>
<td>100</td>
<td>(251)</td>
</tr>
<tr>
<td>5</td>
<td>50</td>
<td>29</td>
<td>50</td>
<td>585</td>
</tr>
<tr>
<td>6</td>
<td>50</td>
<td>29</td>
<td>0</td>
<td>1,421</td>
</tr>
<tr>
<td>7</td>
<td>40</td>
<td>13</td>
<td>100</td>
<td>(293)</td>
</tr>
<tr>
<td>8</td>
<td>40</td>
<td>13</td>
<td>50</td>
<td>543</td>
</tr>
<tr>
<td>9</td>
<td>40</td>
<td>13</td>
<td>0</td>
<td>1,379</td>
</tr>
<tr>
<td>10</td>
<td>50</td>
<td>13</td>
<td>100</td>
<td>487</td>
</tr>
<tr>
<td>11</td>
<td>50</td>
<td>13</td>
<td>50</td>
<td>1,323</td>
</tr>
<tr>
<td>12</td>
<td>50</td>
<td>13</td>
<td>0</td>
<td>2,159</td>
</tr>
</tbody>
</table>

In Scenario 1, a worker employed in Australia 40 hours per week over a six-week period would be $884 out of pocket if required to pay 29 percent in the dollar tax and reimburse airfares and associated costs of travel to Australia. In Scenario 2, if the worker stayed for the maximum 26 weeks, and if half the travel and associated costs were paid by the employer, then savings would still only amount to AUD$2,581, a relatively modest return for enduring 6-months separation from family and community. However, in Scenario 8, if the more generous 13 percent tax treatment was applied, then the same worker would potentially save twice as much—a total of AUD$5,140. And if that same worker chose to work 50 hours per week instead of 40 (as is common in seasonal agriculture), then the saving potential increases to AUD$8,519 (Scenario 11).

The Cost to Employers

The viability of a seasonal workers program for horticulture is also contingent on the cost to the employer. If the additional expense of employing offshore workers is too great, then the project is uneconomic. Under the modelling, there are two components of the cost to growers. The first component is a levy to cover the cost of administering the scheme. Under the Canadian scheme, growers pay a one-off fee of C$35 (plus goods and services tax) to recruit a worker, regardless of whether that worker is employed for the minimum six-week period or the maximum eight months. A more equitable system would see employers pay a levy per worker per week. This would facilitate greater movement of workers between employers enabling greater flexibility for growers and workers and a more efficient allocation of labour to farms. It also enables different employers to share the fixed entry costs of bringing workers to Australia. The modelling sets an arbitrary levy of C$20 per worker per week, which amounts to an additional cost of C$0.50 per labour hour (assuming a 40-hour week).
The second component of the cost to growers is the employer's contribution towards defraying the fixed travel expenses of offshore workers. This amount will be contingent on the formula used to share these expenses between employers and workers, but the additional costs per labour hour will also diminish the longer the workers remain in Australia.

As is clear from Table 4.5, a scenario in which growers paid the full costs of workers travel to Australia would impose considerable extra costs on growers, raising the current award wage of AUD$15.38 by almost 50 percent if workers were employed for a minimum of six weeks. However, if the fixed costs of travel are split 50-50 between workers and employers, then additional cost per labour hour quickly reduces over time. Thus, if a worker was employed for 13 weeks, the increased cost to the employer would be AUD$2.11 per hour of labour (and this would reduce further if the worker was employed for more than the standard 40-hour working week). If a worker was employed for 26 weeks, then the cost to the employer falls to AUD$1.30 per hour worked.

Table 4.5: Modelling Additional Costs to Growers (all dollar amounts in AUD$)

<table>
<thead>
<tr>
<th>Scenario</th>
<th>Administrative levy per worker per week AUD$</th>
<th>Fixed travel costs AUD$ ( grower's share)</th>
<th>Workers' length of stay</th>
<th>Extra cost to grower</th>
<th>Extra cost per labour hour*</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>20</td>
<td>1,672 (100%)</td>
<td>6 weeks</td>
<td>1,792</td>
<td>7.47</td>
</tr>
<tr>
<td>2</td>
<td>20</td>
<td>836</td>
<td>6 weeks</td>
<td>956</td>
<td>3.99</td>
</tr>
<tr>
<td>3</td>
<td>20</td>
<td>1,672 (100%)</td>
<td>13 weeks</td>
<td>1,932</td>
<td>3.71</td>
</tr>
<tr>
<td>4</td>
<td>20</td>
<td>836</td>
<td>13 weeks</td>
<td>1,096</td>
<td>2.11</td>
</tr>
<tr>
<td>5</td>
<td>20</td>
<td>1,672 (100%)</td>
<td>26 weeks</td>
<td>2,192</td>
<td>2.11</td>
</tr>
<tr>
<td>6</td>
<td>20</td>
<td>836</td>
<td>26 weeks</td>
<td>1,356</td>
<td>1.30</td>
</tr>
</tbody>
</table>

* assumes a 40-hour week

SECTION 4.5 THE CHALLENGE OF REGULATION

Canada's Seasonal Agricultural Workers Program has been described as an example of world's best practise in the importation of temporary foreign labour for agriculture; and as outlined above, the Canadian scheme has many elements to recommend it. However, the continuing problems with the operation of the Canadian scheme suggest that questions of equity and social justice deserve greater attention.

It is also essential to recognise that labour migration entails risks, as well as opportunities; social and economic costs, as well as financial benefits. Children may be raised with one or both parents absent, marriages struggle and sometimes fail under the impact of long periods of separation, and increased mobility accelerates the spread of sexually transmitted diseases (including HIV/AIDS).

Civil society leaders and members interviewed in the Pacific for our research have raised several concerns on the social impacts of a seasonal labour scheme. These concerns revolve around childhood developmental issues, family break-downs leading to stress and depression, burdens on older women who do not have superannuation and may be expected to shoulder additional responsibility for (unpaid) childcare, possible health risks related to working away from home, and increased vulnerability of women to sexual harassment in the workplace. These problems have been documented in relation to an existing group of temporary migrant workers in the Pacific (Box 4.2).
A crucial source of revenue for the small island developing states of Tuvalu and Kiribati are the remittances of seafarers who crew vessels for international shipping companies from North America and Europe. The Secretariat of the Pacific Community (SPC) has conducted detailed studies of seafarers’ remittance spending and the economic and social implications of seafaring for community development (Dennis, 2003). This research shows that the actions of overseas workers have negative, as well as positive impacts on the social and economic circumstances of dependants and communities. Although the type of work, recruitment and skill levels for sailors, and length of absence are different to seasonal agricultural work, the SPC study provides important pointers on social issues that would be useful in designing pilot programs for temporary agricultural work in Australia.

- The seafarers’ wages were the basis of economic support for many people within the home community, ranging from 1–30 people. The study estimates that 4,200 people in Tuvalu (population 10,000) and 10,200 people in Kiribati (population 85,000) were directly dependant on the seafarers’ income.
- Loss of employment by seafarers due to illness or injury had ‘catastrophic’ effects on the economic circumstances of some families.
- Wives and partners of seafarers reported difficulties maintaining contact with overseas workers, causing stress and depression. This was exacerbated because depression is not considered a real ‘health problem’ in many Pacific cultures.
- Some seafarers engaged in unsafe sexual activity while overseas, often under the influence of alcohol. There is an increased risk of HIV/AIDS and sexually transmitted infections for the workers, but also for wives/partners who find it difficult to refuse fearing violence.
- An increase in violence against spouses was also related to alcohol abuse, with returning sailors engaging in drinking sessions with their mates. Women were reluctant to report domestic violence to police in this case because 70-80 percent are dependant on their spouse/partners’ income. The majority of spouse/partners and children reported difficulties resuming relationships with returning seafarers.
- There are complex gender and childhood development issues when parents communicate largely with their spouse rather than their children while overseas. Children also reported anger or annoyance at their father on his return for disrupting household routines, ignoring their personal development, or diverting their mother’s attention to caring for her spouse rather than her children.

There is some internal migration from outer islands to the main island of Tarawa, as seafarers’ families move to the capital to avail themselves of more time with their spouse or parent in between voyages.

This raises a key question: is it possible to carefully design a program that meets the needs of growers for seasonal labour at a reasonable cost while offering protection to the rights and well-being of temporary migrant workers? A scheme that is laxly administered, in which market forces alone are allowed to determine outcomes, and in which no effort is made to ameliorate the social impacts and risks of labour migration, may produce an outcome in which the social costs remain very high.

The potential development contribution to be made from increased labour market access in industrialised economies has also been raised by island governments during regional trade negotiations—with labour mobility an element of trade in services under the Pacific Island Countries Trade Agreement (PICTA), the Pacific Agreement on Closer Economic Relations (PACER), and the Economic Partnership Agreement (EPA) being negotiated between the European Union (EU) and Pacific members of the African, Caribbean, and Pacific grouping (ACP) under the Cotonou Agreement.32

New Zealand’s experience with earlier schemes of temporary workers (up to three years) from the Pacific has not been without issues of overstaying and working conditions. Nevertheless, in recent years the New Zealand Government has introduced a residency quota scheme for Tonga and Fiji, along with skilled migration programs. The New Zealand Government has also recently indicated that
it is open to considering additional seasonal programs for unskilled migrants from the Pacific islands and is reviewing the lessons from its previous experience, such as length of tenure to qualify as temporary (three years may be too long), the needs of the domestic private sector, and the role of source-country governments in ensuring compliance.

This section outlines some of the key issues that need to be addressed in the regulation and administration of seasonal work schemes in order to ensure that they operate both fairly and efficiently.

**Information and Communication**

The negative social impacts of existing labour migration on sending countries reinforce the need for pre-departure training and information sessions for seasonal workers, as a crucial element of any scheme. This could involve a range of participants, representing governments of the sending and host nations, growers/employers, unions, and church leaders, who could provide accurate and timely information to prospective seasonal workers before they join schemes or travel. Pertinent issues for discussion (Rokoduru, 2005) include:

- wage rates and labour rights and conditions (hours, meal breaks, occupational health and safety);
- cultural issues (Australian social norms);
- visa requirements and consular support;
- banking and remittance procedures;
- mental and physical well-being (the challenges posed by loneliness and isolation from family, substance abuse, gambling and the risk of HIV/AIDS).

Under the Canadian scheme, workers recruited from the Caribbean are required to complete two days of induction training prior to departure. However research carried out by the North-South Institute suggests that ‘the pre-departure Farm Work Orientation program may be deficient in providing a range of important information on Canada to the migrant workers’ (Russell, 2004). The training makes no distinction between returning workers and those who are travelling to Canada for the first time. For first-time workers, there appears to be inadequate attention paid to such issues as workplace health and safety, the use of protective equipment, and the different hazards that may be encountered on different types of farms (e.g., heat stress in greenhouses, green tobacco sickness on tobacco farms). For long-term workers, issues such as their pension rights in Canada and how to claim them appear to be neglected (Downes and Odle-Worrell, 2004). Similarly, the pre-departure orientation provided to Mexican participants in CSAWP was found to be inadequate in advising workers about ‘the work situation; workers’ rights; fringe benefits (health insurance, pension, reimbursement of taxes, workers’ compensation, etc.); the legal deductions made to workers’ wages; and especially the mechanisms for claiming these benefits’ (Verduzco and Lozano, 2004).

Dr. Rudi Robinson, who coordinated the study of the Canadian scheme for the North-South Institute, believes that more could be done to engage experienced migrant workers in the delivery of pre-departure training to new recruits. He even suggests using experienced returned workers to assist in the process of recruitment itself (Robinson, 2005).

Other support systems could be incorporated in seasonal work schemes to address social impacts. For example, Pacific island communities and churches in Australia can play a support role for seasonal workers, while employers could assist with communication between seasonal workers and their families at home through provision of telephones and computer terminals with Internet and email access in church or community centres in Australia (Kioa, 2005).
Administration

The 2003 Senate Committee into Australia’s relations with the region (Australian Government, 2003) recommends a pilot scheme but says that:

…the model developed provides for management and organisational arrangements to be the responsibility of the source country and adequate mechanisms be put in place for training and transfer of skills.

However, such a proposal places a large burden on small island states. A more realistic approach would involve a government-to-government framework or treaty as in Canada’s CSAWP, outlining the responsibilities of both host governments. Forum Secretariat officials have suggested that the Pacific Islands Forum could assist with creating a regional framework agreement, but that individual governments could negotiate formal bilateral treaties that reflected their particular needs, population profiles, etc.

One pitfall for a more regulated scheme is that rural villagers from the Pacific Region would have less comfort with a complex bureaucratic scheme, especially where the only High Commission is located in the capital city. Given low levels of literacy in Melanesian countries like Papua New Guinea, Vanuatu, and Solomon Islands, and ‘a cultural aversion to lots of paperwork’ from many islanders, there may be costs and delays in regulation and recruitment procedures (Kioa, 2005; Rokoduru, 2005).

Experience in Canada suggests that complexity can result in migrant workers missing out on their entitlements—for example tax returns or workers compensation—because they do not have the skills to negotiate bureaucratic systems. Similarly, horticultural producers do not have time to deal with complex paperwork at the height of the harvest; so while a scheme must be regulated, it also needs to be user friendly for both workers and employers.

There is also a question of where employment contracts are signed as this has some implications for labour rights or for employees who want the Ministry of Labour to follow up breaches of contract, unpaid or delayed wages, and long-term occupational health problems.

Recruitment

The need for targeted and ethical recruitment of seasonal workers takes on particular importance given the disparities in wage levels between Australia and most island countries. There is anecdotal information on skilled workers travelling to Australia for fruit picking and unskilled labouring work because they could earn more than their own trade or profession (e.g., school teachers who travel to Australia on a tourist visa during the long summer break and go fruit picking for a couple of months after briefly visiting relatives). Recruitment schemes should be targeting the unskilled rather than taking skilled trades and professional staff away from the workforce and undermining the policy intent of seasonal worker programs.

There is also anecdotal evidence from the Canadian scheme of local politicians intervening inappropriately in the recruitment process in labour supply countries (Russell, 2004), which might suggest consideration of recruitment by private sector agencies. There is a growth in labour hire in Australia; by 2001 more than 160,000 people in Australia worked for labour hire firms (ACTU, 2003). Australian and international companies have already expressed an interested in being engaged if government gives approval for an offshore seasonal labour scheme.

However, if recruitment is to be conducted by private sector labour hire agencies, there is a need for closer government regulation of practices. It is not hard to find examples of fraudulent behaviour by recruiters in the Pacific, exploiting the hopes of poor communities for a better life.
• Up to 20,000 people in Fiji paid a registration fee of at least F$150 to a recruitment company in order to be listed for work in Kuwait and Iraq, even though there were only 2,000 jobs on offer (Pareti, 2005);

• Recruiters in Vanuatu promising non-existent jobs in Australia sought ‘administration fees’ of 17,000 vatu (AUD$200) from rural villagers (Vira, 2005);

• In 2003 in Fiji, a US recruiter was collecting US$1,200 payments from Fijian nurses without providing jobs, a fraud exposed when nurses complained to their union, the Fiji Nursing Association (Lutua, 2005).

There is also evidence of abuse in recruitment for temporary labour schemes elsewhere in the world. For example, Thai workers recruited to do agricultural jobs in the United States under its H-2A temporary visa program, report paying up to US$2,000 each to local recruiters in their homeland to secure a place on the scheme (Ward, 2005).

Private sector recruitment is not the only nongovernment option for seasonal labour programs. There are already community organisations in Pacific countries that have links with particular regions of Australia that could co-ordinate the selection of personnel. For example, the National Farmers Association in Tonga has ties with members of the Tongan community in the Victorian town of Robinvale and has already developed detailed proposals for recruitment of Tongans for fruit picking if a government approved scheme could be started (Tatola, 2005; Ramsey, 2005).

There are overseas examples of government, workers, and employers co-operating to develop appropriate standards for seasonal work recruitment and operation; for example, the Temporary Labour Working Group is a consortium of major retailers, growers, suppliers, labour providers, and trade unions in the United Kingdom. The Working Group was set up in September 2002, convened by the Ethical Trading Initiative with co-operation from government. Partly as a result of the Working Group’s lobbying activities, a Private Member’s Bill was enacted in July 2004 as the Gangmasters (Licensing) Act. The Working Group has also developed a code of practice for labour providers to agriculture and the fresh produce trade. While the code is voluntary, one industry group—the Association of Labour Providers—has made compliance with the code a condition of membership. The commitment by other employer groups (like major supermarket chains) is more vague, promising only to ‘actively encourage all suppliers to use only labour providers who are working to comply with the code of practice.’ The code is also seen as a forerunner to compliance arrangements that are to be introduced to the statutory licensing of labour providers sometime in 2006.36

Policies such as these could be adapted so that recruitment becomes an activity undertaken in partnership with Pacific island governments. Good governance has been an increasing focus of Australia’s international development assistance, and specific attention has been devoted to assisting Pacific island governments to upgrade their immigration processing capacity. Linking the Australian aid program to the recruitment and operation of a seasonal agricultural workers program could provide a practical form of capacity building.

Whichever way recruitment is handled, unions believe that any seasonal workers scheme must involve more than monitoring of conditions for temporary workers; the scheme must be regulated by government, and there must be a system of sanctions for breaches of those regulations. Australian and Pacific unions through the ACTU and SPOCTU would seek collaboration with and involvement in any institutions created to regulate the scheme (Tate, 2005; Matheson, 2005; Singh, 2005).

Labour Rights and Working Conditions

Naturally there would be concerns from trade unions about the possible exploitation of foreign temporary labour by unscrupulous employers. Leaders of trade unions from the Pacific and Australia
have stressed that any seasonal work scheme must not be used to undercut wages and conditions for Australian workers and must adhere to core labour conventions and standards (Singh, 2005; Tate, 2005; Matheson, 2005). In particular, the evidence of the abuses in the temporary employment of skilled foreign workers has contributed to the opposition of the Australian trade union to such initiatives. The Australian trade union has maintained that they would only support schemes that respect the right to join the relevant trade union. There is considerable support for pilot programs of a seasonal work scheme from a range of employers’ and business organisations in Australia (including the National Farmers Federation and the Australia-Pacific Islands Business Council) and from some nongovernment development agencies, such as Oxfam Australia (Oxfam Australia, 2006).

Pacific governments have pledged to uphold core labour rights under Article 50 of the EU-ACP Cotonou Agreement, but specific International Labour Organisation (ILO) conventions covering migrant workers have not been ratified by Australia, New Zealand, or any Pacific island governments. The ILO Office for the South Pacific in Suva has a program to encourage Pacific governments to sign and ratify core labour standards (Zakaria, 2005). As labour mobility increases in the region, Pacific Island Forum member governments will need to develop policy and legislation to extend this to the relevant conventions covering migrant workers.

The World Council of Churches (Office for the Pacific) and the Pacific Conference of Churches have also called on Pacific governments to sign, ratify, and implement the provisions of the Migrant Workers Convention (Tevi, 2005; Vea, 2005). The Convention entered into force in July 2003, but thus far it has not been signed or ratified by Australia, New Zealand, or any Forum island state. All of the 21 states that have acceded to the Convention are primarily migrant-sending rather than migrant-receiving nations, and as such the Convention remains largely aspirational in nature.

Under existing temporary labour programs around the globe, a migrant worker is ‘usually required to work only for the employer specified in the work permit’ (Ruhs, 2005). This restriction often leaves migrant workers vulnerable to exploitation and abuse, since protests against dangerous working conditions, underpayment, or unreasonable demands by a particular employer can lead to the dismissal and consequent expulsion from the country of employment. It should be possible to design a seasonal labour scheme where workers are not tied to individual employers but can circulate more broadly within an industry sector (such as horticulture).

Creating Incentives to Limit Overstaying

A frequent objection to temporary labour programs is that workers will overstay their visa and fail to return home when their seasonal work is ended, at great expense to the host government. As noted above, the Canadian experience suggests that this fear is greatly exaggerated. In fact, it is the very lack of legal avenues to enable non-residents to be employed in low-skilled jobs, like fruit-picking, that generates the problem of overstaying in the first place.
The paradox of tough border controls is that they induce undocumented migrants to stay in the host nation much longer than they might otherwise have chosen to do by raising the financial cost and personal risk of movement. In the 1980s the average estimated length of stay of undocumented Mexican migrants in the United States was three years; but by the late 1990s, after the major fortification of the border, it had blown out to nine years. Migrants fear that if they leave, then returning may be impossible (Constant and Zimmermann, 2003).

It can be contended that the most powerful factor in ensuring that workers return home at the end of the season would be the secure knowledge that they can be re-engaged to work in Australia for a similar amount of time in subsequent years. There is also potential for both ‘carrot and stick’ to reduce overstaying, which would involve governments developing policy that could assist seasonal workers to return to their home country.

There has been a proposal for a form of trust scheme by which a proportion of wages would be transmitted home (Narsey, 2004); though if compulsory savings are to be deducted from the workers’ wages, then it is imperative that at least some of this money would be immediately available to family members in the home country for necessary living expenses. There are existing schemes when employers transmit funds home on a regular basis on behalf of the seasonal worker, such as the Kiribati and Tuvalu seafarers program (Dennis, 2003).

There are other ways to maximise the likelihood of return, for example, by providing incentives such as reduced application fees or bonuses for returning workers who abide by visa requirements. It could be a feature of the program that workers who return home can claim an automatic refund on taxes paid in Australia, or gain early access to superannuation contributions made by them or on their behalf. As in Canada, the recruitment criteria for seasonal workers could be skewed to select migrants deemed most likely to return to their homeland— that is, workers who are married with children still at home (Basok, 2000b).

**Government Policy to Support Migrant Workers and Remittance Flows**

As well as developing ‘negative’ incentives, there is also a need for Pacific governments to develop positive policies that encourage remittances and legal return. At present, few Pacific governments have comprehensive legislation or regulations to assist migrant workers with:

- roll-over of any superannuation or pension rights;
- reduced freight costs to bring home goods;
- tax benefits for repatriated funds;
- maintenance of seniority and leave entitlements for former government workers.

One of the problems for Pacific island governments in developing policy in this area is the lack of hard data. For long-term development of skilled migration and temporary work programs, there is a need to develop better statistical and monitoring capability of labour market shortfalls and surpluses. As part of its reporting on the Millennium Development Goals, the Secretariat of the Pacific Community has highlighted the need for better statistical collection, analysis, and monitoring; and governments could extend this to labour market studies (UNDP/SPC, 2004).

One suggestion for monitoring the flow and usage of remittances is to incorporate a series of questions in national censuses, which could provide a regular and comprehensive database of changes to national remittance patterns (Brown, 2005). The March 2005 Forum Secretariat Remittance Roundtable also recognised a number of steps that Pacific island governments could take to enable increased remittance flows. These include development and promotion of innovative and appropriate...
savings and investment instruments for overseas migrants and seasonal workers; development of a
more affordable and secure remittance systems; adjustment of tax policies for remitted funds;
development of government, nongovernment, and church programs to look after the needs of migrant
workers (information, social, consular assistance, human rights, etc) and of family members left
behind; and improving financial literacy with advisory and training schemes to encourage returning
seasonal workers to invest their earnings (e.g., business set-up advisory programs, micro-credit
schemes, investment matching funds) (Pacific Islands Forum Secretariat, 2005).

Innovative programs elsewhere in the world have attempted to enhance the developmental impact of
workers' remittances by offering counterpart funds from official sources. The Philippines government
has a similar program (Lingkod sa Kapwa Pilipino) encouraging migrants abroad to support
development projects in their home region 'in such areas as infrastructure, education and health care'
and many Latin American migrants in the United States have started 'hometown associations' in
which they commit a proportion of their savings to a common pool for community development
projects in their home countries (United Nations, 2004). In what is known as the 3 x 1 program in
Mexico, federal, state, and local governments each match such investment flows on a dollar-for-dollar
basis (Taparia, 2005). These programs seem to have had success in combining private-public capital to
deliver essential services to migrant-sending communities, although there are concerns that singling
out remittance money for matching with public funds could divert government investment flows away
from other priorities and in favour of a particular group or region.

Government policy settings can facilitate (or hinder) the sending of remittances through regulations on
taxation, investment, and inter-country movement. A problem in expanding remittances to the Pacific
is that costs of transferring funds are relatively high and sometimes insecure. There is potential for
banks and other private sector financial organisations to expand services that assist in remittance
flows. For example, the National Bank of Fiji has posted an officer in the United Kingdom to act as an
advisor on savings, investment, and remittances for more than 2,000 Fijians serving in the British
Army; and the ANZ Bank has expanded its rural banking program to encourage rural islanders to
establish bank accounts. An estimated 300,000 people in Fiji, out of a population of 850,000, do not
have a bank account (Bhai, 2005).~

Gibson, McKenzie, and Rohorua (2006) have found that the cost of remitting funds from New Zealand
to Tonga is substantially higher than in more competitive markets (up to 3 times more expensive than
remitting funds between the United States and Mexico for example). Most funds are remitted in small
amounts (average size is NZ$250) resulting in high transaction costs. Their survey of remittance
behaviour suggests that if the high costs of remitting funds to Pacific island nations could be reduced,
then the savings would be passed on in the form of an increase in the value of funds remitted. They
calculate that:

...lowering the fixed cost of sending money through banks and money transfer
operators from New Zealand to Tonga to levels close to that found in the most
competitive world markets would result in a 28 percent increase in remittances from
existing remitters. Lowering this fixed cost may additionally induce some non-
remitters to start remitting (Gibson, et al., forthcoming).

Within Australia and New Zealand, there are two key areas where policy change would assist in the
effective implementation of seasonal work programs. First, any seasonal labour program will need to
take account of taxation agreements (or the lack of them) between Australia and the Pacific to avoid
double taxation. As noted above, non-residents who perform harvest labour in Australia (working
holiday makers) are currently taxed at a higher rate (29 percent) than resident workers (13 percent) and
do not benefit from the tax-free threshold. Unless this provision is altered, Pacific islanders
performing seasonal work could find themselves subject to an excessive tax burden.
Second, there will be political issues relating to undocumented workers from Pacific island countries currently living or working in Australia and New Zealand in breach of their visa conditions. The creation of a regulated temporary work program could be accompanied by an amnesty, which would give time for undocumented workers to regularise their position, either as permanent migrants or as temporary workers. The issue of residency rights for workers is of crucial concern for Australian unions and Pacific communities in Australia, and migration policy would need to be co-ordinated with the introduction of seasonal work programs.45

Sharing the Costs

Any seasonal labour scheme for Pacific islanders to work in Australia will involve costs—bureaucratic costs of regulation, administration, and oversight; and the practical costs of airfares, visas, medical checks, and accommodation. Increased numbers of Pacific workers in Australia will also place new burdens on Pacific High Commissions, consular staff, immigration, and labour ministries. A key question in the design of the scheme arises: how will those costs be shared between growers, workers, and governments without sacrificing equity or efficiency?

There has been a decline in the role of no-fee public sector employment services and a rise in the role of for-profit private sector recruitment agencies. As a result, ‘the general trend in the migrant recruiting business has been for costs to be shifted from employers to workers’ (Martin, 2005).

In an unregulated environment, the North-South disparity in wealth and opportunity creates conditions in which recruitment agencies can extract exorbitant ‘application fees’ from would-be migrant workers who are hungry for jobs, and then drive down the conditions and pay under which they are expected to work:

In most cases, migrants, who have incurred debts to go abroad, wind up being forced to make the adjustments from the promises to the realities, not employers (Martin, 2005, p 3).

This trend is objectionable because it imposes the greatest costs on the most disadvantaged actors.

It is reasonable that employers should share the costs of any seasonal workers scheme in Australia. Equity is only one consideration here; another is that there should be a monetary incentive for employers to look first to the local labour market to secure workers.

While Canada’s scheme has been tailored much more heavily to the needs of employers than workers, it does provide a reasonable model of cost sharing. As noted above, growers provide workers with free accommodation in addition to wages and pay a non-recoverable administration fee of C$35 per worker to FARMS. Workers’ travel is organised through CanAg travel services, which is a subsidiary of FARMS; and farmers pay the cost of all transport within Canada. International travel is paid in advance by farmers, with around 40 percent of this cost later re-couped via deductions from workers’ wages. Farmers pay the worker’s visa fee of C$150 up front, and this amount can be fully recouped through wage deductions. However, in recovering costs from workers, farmers cannot deduct a maximum of 5 percent of gross earnings per pay period (in the case of Mexican workers) or C$3.50 per day (for Caribbean workers). The cost-sharing arrangements used in the Canadian scheme could be used as the basis for any similar scheme involving Pacific island nations. The significant increase in the aid envelope for the Pacific could also provide the context and resources to provide some services, such as pre-departure training and visa fees for applicants, in the source countries.
SECTION 4.6. CONCLUSION

The rights and choices of temporary non-citizen workers will be more limited than those available to Australian citizens and permanent residents working in the same industry. Australian workers can always seek employment in a different industry or seek access to the Australian social welfare system. In this sense, Australian workers are too ‘free’: they can turn down the work on offer in the horticultural industry unless pay and conditions radically improve. However, growers are constrained in their ability to offer workers a better deal, since their farming operations are subject to international competition and a severe cost price squeeze.

The Trade Off

As stated, this is why offshore schemes become necessary in the first place: growers need a reliable supply of workers who will remain in fields and orchards until time-sensitive harvests are completed. Offshore seasonal workers are ‘unfree’—or at least ‘less free’ than their Australian counterparts—to walk off the job or demand significantly higher wages (Satzewich, 1991). In other words, from the workers’ perspective, any scheme to bring in short-term seasonal labour from overseas will involve some trade off between their individual rights and access to economic opportunities in the Australian labour market. Pacific islanders, denied jobs in their own societies, will be only too willing to cut such a deal; though they may lack the bargaining power to protect their own interests and fundamental rights.

This points to the importance of regulation and the key question for this research: is it possible to design a seasonal workers program for Pacific islanders where this trade off can be seen as reasonable, where the benefits of the economic opportunity on offer through work in Australia outweigh the disadvantages of giving up certain rights? Or as Ruhs (2005) puts it, the aim is ‘a balanced approach that is both realistic, by taking account of existing realities in labour immigration policymaking; and idealistic, by striving to improve existing labour migration policies and outcomes for all involved, especially for the migrant workers and their countries of origin.’

With this thinking in mind, it should be possible to lay down some basic ground rules to ensure that foreign seasonal workers have some basic protections:

- receive the same pay and conditions as Australian or New Zealand workers in the same industry;
- are free to join local trade unions and to withdraw their labour;
- are not tied to a particular employer but can seek alternative employment, at least within the horticulture industry in the same geographic area;
- are protected by the same health and safety legislation and industrial accident compensation arrangements as Australian or New Zealand workers;
- pay Australian or New Zealand taxes, are treated on equal terms as residents for tax purposes and are eligible for medical treatment under the universal health care system;
- are guaranteed a minimum length of stay and a minimum amount of work in Australia or New Zealand (enough to cover their expenses and generate reasonable savings);
- have a reasonable expectation of being re-employed in subsequent years;
- can bring complaints to an independent monitoring authority, which oversees the operations of the scheme;
- do not bear the full costs of the scheme but share these costs with their employer (and are not
subject to onerous deductions from their pay); 
• can expect sanctions to be applied to employers who fail to honour employment contracts, offer substandard accommodation, or create unsafe workplaces.

While the policy emphasis should remain on designing a temporary scheme, which is circular in nature, it is important to bear in mind that importing ‘labour’ involves people not goods. Over the course of time, there will no doubt be some Pacific island workers who will form personal attachments with local citizens or residents and have strong reasons to remain in the host country. Equally there may be employers who desire that particular workers remain in permanent full-time employment for 12 months of the year and who are willing to sponsor those employees and their family as permanent migrants. Such a balance between policy emphasis and individual choice is entirely consistent with many prevailing temporary worker schemes in the world. It would be unfortunate to duplicate the situation that exists under the Canadian scheme, in which workers may spend the majority of their time in Canada (up to 8 months per year) over a period of decades and yet gain no residency rights whatsoever—a status that Sharma describes as ‘permanently temporary’ (Sharma 2001).

Beyond Trade and Economics

Policymaking in the area of labour migration is ‘an inherently moral exercise that involves a discussion of values and ethics, not just of facts’ (Ruhs, 2005). If the issue of labour market access is presented as a trade issue or purely in terms of an economic exchange, then this removes the development focus of the process and downplays individual rights and the potential for adverse social impacts.

If Australia or New Zealand are to introduce a seasonal employment scheme and open up its labour markets to Pacific island workers, then the starting point should be a series of small-scale pilot projects. However, the scheme should not be conceived solely in economic terms or seen as a bargaining chip in trade negotiations intended to further liberalise Pacific island economies. Rather, it should be regarded as a development opportunity: a mechanism to advance, however modestly, sustainable economic and social development in the communities from which the workers come, and to encourage the expansion of ‘people-to-people’ contacts between Australia, New Zealand, and the Pacific.

A model for this approach can be found in Agricultores Solidarios (Farmers for Solidarity) in Spain. The Farmers Union of Catalonia, the Livestock and Produce Farmers of Valencia, and the Farmers Union of Majorca have set up a program to meet their need for additional seasonal labour while also encouraging human, economic, and social development in less-favoured agrarian societies (Peix, no date). Under the program, seasonal migrant workers are recruited from Colombia, Morocco, and Romania. There is a strong emphasis on training and on encouraging positive interaction between the migrant workers and their host communities in Spain. Program coordinator Maria Peix describes it as ‘a two-way exchange that involves civil society,’ with the temporary workers becoming ‘development agents that boost new processes led by themselves in their countries of origin.’

The ‘sister city’ relationships that exist between some local councils in Australia and towns or regions overseas could provide a model here. Under this scenario, a specific Australian municipality might develop a seasonal labour program with a particular island or region in a Pacific nation. The Australian government and the Pacific Islands Forum would create the framework and lay down minimum rules and standards for the scheme, and would approve any specific arrangement before it commenced, but it would be up to local communities to initiate the project and make it happen. For example, the town of Robinvale in Victoria, which has a significant Tongan-born and Tongan-descended population, might seek to develop a seasonal labour program with a particular region or island in Tonga, building on pre-existing links and personal connections and indeed harnessing social capital to lower the costs and increase the benefits of labour mobility.
In addition to recruiting seasonal workers for horticulture, community organisations (perhaps church groups) could take a lead role in organising social events and cultural activities to welcome the workers into the community. Tonga-related educational activities could be devised for local schools, and information evenings could be convened to help prepare locals for the seasonal workers arrival. Workers would be engaged in some level of formal training—for example in first aid, chemical safety, and handling—to ensure that they go home with useful skills as well as money in their pockets.

Service clubs (Rotary, Lions), churches, and other groups might engage in fund-raising for the sister community (helping to purchase books for Tongan schools or equipment for a medical clinic), while volunteer programs (Australian Volunteers International and Australian Business Volunteers) might co-ordinate development activities (e.g., visits to Tonga by surgeons or other health professionals for special clinics). Community-based organisations in both countries could co-operate to develop ways for remittances to contribute to general development activities through micro-finance schemes, small business programs, and the education of young women.

Linking specific localities in this way would help to create a bond between communities in Australia and the Pacific and foster people-to-people links: each community would have an investment in the success of the other and in the success of the seasonal labour scheme.

Seasonal employment programs for Pacific Islanders to work in Australian horticulture are not a panacea for the challenges of unemployment and underemployment in Forum member countries. Nor will such schemes transform the economic development prospects of small island states. Nevertheless, a seasonal labour program does have the potential to make a material difference to the well-being of significant numbers of Pacific island workers and their families and communities, especially those living in rural areas and outer islands. It also has the potential to significantly ease the seasonal labour shortages that hold back the horticultural industries in Australia and New Zealand, and to add symbolic value as a gesture of goodwill by the region’s two major powers towards their Pacific neighbours.

In conclusion, it is worth noting that inaction is also a policy decision. As outlined above, current labour shortages in seasonal horticulture result in relatively high rates of illegal employment. Unless there are initiatives to increase the supply of legitimate workers, the existing problems will continue and potentially worsen. This is a lose-lose-lose situation for employers, workers and government. Employers run the risk that raids will interrupt their peak harvest and be fined for breaking the law; undocumented workers remain vulnerable to exploitation, arrest, and detention; legitimate workers run the risk that their wages and conditions will be eroded by illegal employment; and government must continue to finance expensive immigration compliance activities that foster ill-feeling in the horticultural industry and local communities.
References


Australian Mango Industry Association Ltd. 2006. Submission 15 to the inquiry into Pacific Region seasonal labour programs. Australian Senate Employment, Workplace Relations and Education Committee. Canberra, Australia.


EDC (Economic Development Committee). 2004. Economic contribution of Victoria’s culturally diverse population, Parliament of Victoria,


Grattan, Michelle 2005 ‘Picking on fruit pickers’ The Age 14 February p.2


Growcom. 2006. Submission 9 to the inquiry into Pacific Region seasonal labour programs. Australian Senate Employment, Workplace Relations and Education Committee. Canberra, Australia.


Senate Foreign Affairs, Defence & Trade References Committee. 2003. A Pacific Engaged – Australia’s relations with PNG and the Islands of the South-West Pacific. Canberra.


Strong, Geoff. 2006. Land of olive oil and money as investors hit new markets’ The Age April 14-15, p. 8


Tate, Alison. 2005. Personal interview (June). International Officer, Australian Council of Trade Unions (ACTU), Melbourne.

Tatola, Mumia (see Mumia)


http://www.ufcw.ca/publications_main.cgi


Notes

1. This research was part of a broader program of work carried out for the Pacific Labour and Australian Horticulture project at the Institute for Social Research at Swinburne University of Technology. This project is funded by the Australian Research Council as an industry linkage grant. The industry partners are the Sunraysia Mallee Economic Development Board, the Swan Hill Rural City Council and Oxfam/Community Aid Abroad. However the views expressed in this paper are those of the authors and do not necessarily represent the views of the industry partners.

2. The original length of time to work with one employer was 3 months, but this period was doubled in May 2006. Australia has reciprocal working holiday maker relationships with Britain, Canada, the Netherlands, Ireland, Japan, South Korea, Malta, Germany, Sweden, Denmark, Norway, Finland, Hong Kong, Taiwan, Cyprus, Italy, Belgium, France and Estonia. Under Australia’s free trade agreement with Thailand, young Thai citizens can also apply to work in Australia but they are subject to the additional requirement that they hold tertiary qualifications.

3. In April 2005, the government offered a second 12-month visa to travellers who engaged at least 3 months of ‘harvest work’; and in May 2006, the government included fishing, pearling, shearing, abattoir work and forestry in the list of jobs that would qualify for a second visa.

4. See Annex G for details on the survey design and methodology and Mares (2006) for a more
5. Under the Australian Standard Classification of Occupations (ASCO) agricultural and horticultural labourers are categorised as skill level 9 (the lowest point on the scale), which is insufficient to meet the points test for migration to Australia regardless of any other circumstances (such as offers of work, age or English language proficiency).

6. The general categorisation of horticultural work as ‘low skilled’ or ‘unskilled’ is misleading since it downplays the knowledge required for handling specific crops and tasks (incorrectly pruned vines produce table grapes that are less attractive to consumers in size and shape; stone fruit that is handled roughly or picked when it is too hot will spoil before it gets to market; inexperienced orange harvesters are more likely to injure themselves in falls from ladders).

7. One perceived shortcoming of the survey data identified in that meeting was its failure to adequately capture the implications of major agricultural investments currently being undertaken in the Swan Hill-Mildura region. While responses were received from 16 growers with landholdings of 100 hectares or more, our industry partners and other industry figures familiar with the region were aware that there were a number of major projects in development.

8. Private discussion with the author

9. A distinction is made between the Working Holiday Maker Scheme in Australia and New Zealand and seasonal agricultural labour schemes elsewhere for two reasons. Firstly, the Working Holiday Maker program is not limited to agricultural; secondly, it was never designed to be a labour market program but was intended to be ‘experiential’, allowing young travellers to ‘supplement’ their travel funds through ‘incidental employment, and to experience closer contact with a local community’. (Australian Government, n.d.)

10. In one case, Thai farm workers reported paying US$2000 to a recruiter to join the H-2A program (Ward, 2005).

11. 15,123 workers came to Ontario in 2004 (FARMS statistics http://www.farmsontario.ca/index.htm.)


13. HRSC recently merged with Social Development Canada to become Human Resources and Social Development Canada.


15. Foreign Agricultural Resource Management Service Ontario (FARMS) Employer Information Booklet 2005


17. The exception is British Columbia, which does not admit migrant workers to its health care system – see: http://www.justicia4migrantworkers.org/bcviolating.pdf

18. ‘Discover Ontario: work opportunities in agriculture’ FARMS promotional video supplied to the author.

19. Private meeting with Human Resources and Development Canada, Toronto, June 2005
20. For example, Leigh Binford writes, Mexico’s Ministry of Labour ‘seeks out males from rural areas who are in good physical condition, possess little or no land, resources, or non-agricultural marketable skills, and who are generally married and responsible for maintaining several dependants’ Binford also notes that these selection criteria favour people ‘whose desperation to work ensures that they will form a relatively docile and pliable labour force’ (Binford, n.d.).

21. A news article cites the example of a construction worker who must use breathing apparatus and a body harness in a confined space. The harness must be attached by a rope to a worker equipped with an alarm standing outside the confined space. There are no such requirements for an agricultural worker in similar circumstances, such as cleaning out a tank or silo (Richmond, 2006).


23. For example in 2002 the Canadian Government implemented a pilot program to provide temporary visas to workers from any country in any low-skilled occupation, which has produced some notable scandals, involving worker exploitation. See, for example, Ferguson (2004b).

24. FARMS (Foreign Agricultural Management Service) Regional Report: Caribbean/Mexican Seasonal Agricultural Workers Programs as of 31/12/2004.


28. For a definition of residency rules for tax purposes, see http://www.ato.gov.au/individuals/content.asp?doc=/content/64131.htm


30. An alternative would be to retain the 29% tax rate but provide an automatic 16% tax refund to workers after they leave Australia, and so reduce the total tax take to 13%. This would have the added effect of creating an additional incentive to return home.

31. Obviously there is a strong equity argument that Pacific island workers should also benefit from the tax-free threshold and this would obviously increase their savings potential further. However, it would also introduce a requirement for all Pacific island seasonal workers to complete annual tax returns in order to reclaim tax paid on their initial AUD$6,000 in earnings, which would render the system far more complex.

32. PACER entered into force in October 2002 and PICTA entered into force in April 2003 after six countries ratified it. The text of the two agreements can be found on the Forum Secretariat website at www.forumsec.org.fj. The EPA negotiations are scheduled to be completed by December 2007.

34. For example, under Fiji’s Employment Act, signing a contract in Fiji allows provisions of the Act to apply, while signing a contract overseas does not.

35. One US-based labour hire firm made direct contact with the authors to inquire about our research. Labour contractors have also made submissions to the inquiry into Pacific Region Seasonal Contract Labour being conducted by a committee of the Australian Senate. See http://www.aph.gov.au/Senate/committee/eet_ctte/contract_labour/submissions/sublist.htm

36. For details of the Temporary Labour Working Group and their code of practice for labour recruiters in the agriculture and fresh produce sector, see http://www.lpcode.co.uk/index.asp

37. In one case, Filipino chefs were working up to 60 hours per week but receiving pay that was below the award wage for a standard 38 hour week (McLennan, 2006).


39. Article 50 of the EU-ACP Cotonou Agreement: ‘the Parties reaffirm their commitment to the internationally recognised core labour standards, as defined by the relevant ILO Conventions, and in particular the freedom of association and the right to collective bargaining.’ [http://europa.eu.int/comm/development/body/cotonou/agreement/agr21_en.htm]

40. ILO C. 97 Migration for Employment Convention (Revised), 1949 and ILO C. 143 Migrant Workers (Supplementary Provisions) Convention, 1975.

41. The states that have acceded to or ratified the Convention are Azerbaijan, Belize, Bolivia, Bosnia and Herzegovina, Cape Verde, Colombia, Ecuador, Egypt, El Salvador, Ghana, Guatemala, Guinea, Mexico, Morocco, Philippines, Senegal, Seychelles, Sri Lanka, Tajikistan, Uganda and Uruguay. (United Nations press release 19 March 2003). http://www.unhchr.ch/huricane/huricane.nsf/view01/B87E9E85C7147498C1256CEF00385E50?opendocument

42. The Australian Department of Immigration and Indigenous Affairs (DIMIA) told the 2003 Senate inquiry into Australia’s relations with the Pacific region that without ‘very strong enforcement,’ the non-return of seasonal workers would incur significant expenses for government. Senate Foreign Affairs, Defence and Trade References Committee, 2003.

43. In 2005, Professor Brown had been conducting comprehensive surveys of remittances in Tonga and Fiji, in co-operation with the Department of Statistics in both countries.

44. Figures from ANZ Coconut Wireless, Issue 3 November 2004 (official newsletter of ANZ’s Rural Banking Programme).

45. Interview with executive of Tongan Australia Association, Melbourne, November 2005.

46. For a discussion of this and other trade offs involved in temporary labour migration, see Ruhs
Agricultores Solidarios (Farmers for Solidarity) promote regular migration flows between temporary workers countries of origin and of destination’ (Forum Barcelona, Press Release, 4 September 2004).

The Australian parliament is considering legislation that would impose penalties on employers who knowingly engage undocumented workers (Morris, 2006).