

Chand, Satish; Clemens, Michael A.; Dempster, Helen

Working Paper

A Pacific Skills Visa: Improving opportunities for skilled migration throughout the Pacific region

IZA Policy Paper, No. 183

Provided in Cooperation with:

IZA – Institute of Labor Economics

Suggested Citation: Chand, Satish; Clemens, Michael A.; Dempster, Helen (2021) : A Pacific Skills Visa: Improving opportunities for skilled migration throughout the Pacific region, IZA Policy Paper, No. 183, Institute of Labor Economics (IZA), Bonn

This Version is available at:

<https://hdl.handle.net/10419/264370>

Standard-Nutzungsbedingungen:

Die Dokumente auf EconStor dürfen zu eigenen wissenschaftlichen Zwecken und zum Privatgebrauch gespeichert und kopiert werden.

Sie dürfen die Dokumente nicht für öffentliche oder kommerzielle Zwecke vervielfältigen, öffentlich ausstellen, öffentlich zugänglich machen, vertreiben oder anderweitig nutzen.

Sofern die Verfasser die Dokumente unter Open-Content-Lizenzen (insbesondere CC-Lizenzen) zur Verfügung gestellt haben sollten, gelten abweichend von diesen Nutzungsbedingungen die in der dort genannten Lizenz gewährten Nutzungsrechte.

Terms of use:

Documents in EconStor may be saved and copied for your personal and scholarly purposes.

You are not to copy documents for public or commercial purposes, to exhibit the documents publicly, to make them publicly available on the internet, or to distribute or otherwise use the documents in public.

If the documents have been made available under an Open Content Licence (especially Creative Commons Licences), you may exercise further usage rights as specified in the indicated licence.

POLICY PAPER SERIES

IZA Policy Paper No. 183

**A Pacific Skills Visa: Improving
Opportunities for Skilled Migration
throughout the Pacific Region**

Satish Chand
Michael A. Clemens
Helen Dempster

NOVEMBER 2021

POLICY PAPER SERIES

IZA Policy Paper No. 183

A Pacific Skills Visa: Improving Opportunities for Skilled Migration throughout the Pacific Region

Satish Chand

UNSW and Center for Global Development

Michael A. Clemens

Center for Global Development, IZA and CReAM

Helen Dempster

Center for Global Development

NOVEMBER 2021

Any opinions expressed in this paper are those of the author(s) and not those of IZA. Research published in this series may include views on policy, but IZA takes no institutional policy positions. The IZA research network is committed to the IZA Guiding Principles of Research Integrity.

The IZA Institute of Labor Economics is an independent economic research institute that conducts research in labor economics and offers evidence-based policy advice on labor market issues. Supported by the Deutsche Post Foundation, IZA runs the world's largest network of economists, whose research aims to provide answers to the global labor market challenges of our time. Our key objective is to build bridges between academic research, policymakers and society.

IZA Policy Papers often represent preliminary work and are circulated to encourage discussion. Citation of such a paper should account for its provisional character. A revised version may be available directly from the author.

ABSTRACT

A Pacific Skills Visa: Improving Opportunities for Skilled Migration throughout the Pacific Region*

The demand for skills exceeds supply, both within the Pacific Islands and the high-income countries of the Pacific Rim. Enhancing skilled migration therefore has the potential to generate large economic gains. The Global Skill Partnership is a migration model that can support such mutually beneficial mobility by moving training into the country of origin. In this paper, we outline its regional application to the Pacific. To assess the potential economic gains from such a Pacific Skills Partnership, we present new data on earnings and the cost of training in the Pacific Islands for three qualifications— accountants, computer science graduates, and chefs—and explore how such training could be financed through loan schemes. Graduates could be provided with internationally accredited qualifications and a new Pacific Skills Visa, facilitating their access to work opportunities abroad, particularly in the regions' high-income countries. This Pacific Skills Partnership could bring large economic benefits to countries of origin, destination, and the migrants themselves.

JEL Classification: F22, J11, J24

Keywords: immigration, labor, low-skill, visa, mobility, Pacific Islands, Papua New Guinea, seasonal, temporary

Corresponding author:

Michael A. Clemens
Center for Global Development
2055 L Street NW
Washington, DC 20036
USA

E-mail: mclemens@cgdev.org

* We are grateful to Chakriya Bowman for her support and inspiration and to Glenn Finau, Simon Foo, Luke Forau, Shanti Goundar, Anare Manulevu, Mukesh Kumar, and Martha Waim for their assistance with the collection of data for this paper. We received many helpful comments from Andie Fong Toy, Stephen Howes, Ryan Edwards, Richard Curtain, seminar participants at the Australian National University Crawford School of Public Policy, as well as extensive assistance from three anonymous referees, but the authors are solely responsible for any shortcomings. The survey evidence in this paper was gathered under a protocol approved by the UNSW Human Ethics RECS, case HC190891. We gratefully acknowledge support from the Australian Department of Foreign Affairs and Trade (DFAT) and from Open Philanthropy. The views expressed in this paper are those of the authors alone and do not necessarily represent those of any institutions, their boards, or their funders.

Why the countries of the Pacific should build skills for regional migration

The low-income countries of the Pacific Islands have long provided labour services to the high-income countries of the Pacific Rim.¹ The first recorded work contract was signed in the late 1840s when workers from Kiribati were recruited to work on sheep and cattle farms in New South Wales, Australia (Bedford, Burson, and Bedford, 2014: p. 9). Many of these arrangements failed dramatically to reach their potential for mutual gain. The coercion through deception and kidnapping (“Blackbirding”) of Pacific Island workers to Australia took place throughout the 19th and early 20th centuries, only stopping in the lead up to the formation of the Commonwealth of Australia (Mortensen, 2000).

In recent decades, the demand for migrants with specific skills has increased (Brown and Connell, 2004; Lee, 2009). Seasonal labour migration programs for employment in hospitality and agriculture were established by New Zealand in 2007 and by Australia in 2012 (Gibson and McKenzie, 2014; Government of Australia, 2017b; McKenzie, Garcia Martinez, and Winters, 2008). Programs to train potential migrants for foreign employment were also created; for example, the Kiribati-Australia Nursing Initiative (KANI), funded by Australia’s overseas development assistance, ran from 2004 to 2014 (O’Brien, 2013).

Pacific countries of migrant destination such as Australia, New Zealand, and the United States of America (USA) are all facing aging populations and a shortage of skilled workers (Lutz, Sanderson, and Scherbov, 2008). Many of these shortages are occurring in “mid”-skill professions such as nursing, hospitality, construction, engineering, accounting, and information and communications technology (ICT). For example, Australia is forecast to require an additional 123,000 registered nurses by 2030 (Government of Australia, 2014). Currently, opportunities for such “mid”-skill migration remain small, though this may be changing. For example, the Australian Government’s *2017 Foreign Policy White Paper* announced a “step-up” in engagement with the Pacific Islands through stronger partnerships for economic growth, security, and people-to-people links (Government of Australia, 2017a). In 2018, a new Pacific Labour Scheme was announced wherein workers from the Pacific Islands are now allowed to take up “low”- and “mid”-skilled employment in rural and regional Australia.²

The potential economic benefits from expanding such skilled migration are large.³ Nearly every low-income Pacific Island country has a large youth population. Those under 15 years of age in the Federated States of

¹ In this paper, we predominantly use the term “Pacific Rim” to refer to the following countries: high-income (Australia, Canada, China, France, Japan, New Zealand, South Korea, and the United States of America (USA)) and low-income (The Federated States of Micronesia, Fiji, French Polynesia, Kiribati, the Marshall Islands, Micronesia, Nauru, New Caledonia, Palau, Papua New Guinea (PNG), Samoa, Solomon Islands, Tonga, Tuvalu, and Vanuatu). We will predominantly address skilled migration to Australia and New Zealand as the main countries of destination for Pacific migrants.

² See <https://dfat.gov.au/geo/pacific/engagement/pacific-labour-mobility/Pages/default.aspx>

³ In this paper, we use the term “skilled” to refer to potential migrants who are seeking to enter professions that require at least some form of technical education or even university education. We use the term “unskilled” to refer to potential migrants who are seeking to enter professions that do not require any formal education or training, not even technical education. We recognize that these terms do not reflect the actual skill level of the potential migrants in question—which often includes tacit knowledge, inherent talent, and learning-by-doing—and we aim to move away from this problematic dichotomy. See Cepla and Dempster, 2021.

Micronesia (FSM) number a third of the population while the corresponding figures for Kiribati (35 percent), PNG (36 percent), and Solomon Islands (39 percent) are even higher (see Annex 1). For the Pacific Islands as a whole, PNG makes up 77 percent of the total population; a position likely to be maintained over the foreseeable future given the growth rate of 2.03 percent per annum.

Yet the domestic labour markets of these countries are failing to generate the quantity and quality of jobs needed for this population. Consequently, the youth unemployment rate in several Pacific Island nations, Papua New Guinea in particular, is both high and rising (ILO, 2017). Evidence from the Australian and New Zealand seasonal labour migration programs referenced above suggest that expanding youth migration could reduce this demographic pressure, raise incomes, and increase the value of remittances sent home (Ramasamy et al., 2008; Doyle and Sharma, 2017).

The youth population of the Pacific Islands will only be able to access these opportunities if they invest in skill-building. There is evidence from the high-income countries of the region that such investments are likely to pay off. For example, the average social rate of return for the cost of an individual's investment in a two-year degree in the USA is 12.9 percent, while the corresponding figure for the cost of investment in a four-year tertiary qualification is 10.9 percent (McMahon, 2018). In Australia, those who invest in technical and vocational education and training (TVET) can receive more than their university counterparts, with one study suggesting a premium of 18 percent (Government of Australia, 2019: p. 45).⁴

The costs of training in low-income countries are generally lower, suggesting that the private rate of return could be larger still. Yet the limited evidence available suggests that this is not (yet) the case for the Pacific due to a combination of high training costs and limited opportunities for foreign employment after graduation. In their review of KANI, Shaw, Edwards, and Rimon (2014) noted that the program was marred by high training costs and a lack of international mobility, contributing little economically to Kiribati. Two subsequent initiatives faced similar issues. A Designated Area Migration Agreement (DAMA) was created in 2014 to allow employers from Australia's Northern Territory to sponsor foreign skilled workers for positions they were unable to fill with locals, but this ended in 2018 due to substantial red tape (Curtain, 2019b). In 2007, the Government of Australia's flagship TVET investment in the Pacific was created: the Australia Pacific Technical College (APTC). A review of its effectiveness in 2014 reached similar conclusions (Johanson et al., 2014) though the program continues (and is elaborated upon below).

In addition to these concerns, there is a view among some stakeholders in both countries of migrant origin and destination that such skilled migration should not be facilitated due to concerns about depletion of human capital in the origin countries, sometimes called "brain drain." Evidence is unclear as to whether such

⁴ A possible reason for the difference is that TVET graduates of 25 years of age are likely to have longer work experience than their university counterparts.

depletion, on net, generally occurs. Some empirical research finds that skilled migration has many positive externalities such as remittances, investment and trade linkages with host countries, and better education attainment of community members in countries of origin (Batista, Lacuesta, and Vicente, 2012; Docquier and Rapoport, 2012; Easterly and Nyarko, 2008). Others have argued that the phenomenon is likely to adversely affect some communities (particularly those that are smaller) more than others (Gibson and McKenzie, 2012). Certainly, evidence concerning health professionals migrating from Fiji, Samoa, and Tonga shows that remittances and return migration “bring some benefit to compensate for the skill drain” (Brown and Connell, 2004).

Regardless of the impact of skilled migration, it will be imperative to manage such movement in a way that mitigates these concerns. In 2012, Michael Clemens designed a migration model called the Global Skill Partnership that aimed to increase the global stock of workers within a certain skill and facilitate the migration of some trainees (Clemens, 2015). Both the Global Skill Partnership and its regional application, the Pacific Skills Partnership, will be explored in this paper in detail. In particular, we look at how a new Pacific Skills Visa could be used to facilitate skilled migration throughout the region and thereby realize the potential economic gains from such skills investments.

The Global Skill Partnership

In December 2018, 152 countries adopted the *Global Compact for Safe, Orderly, and Regular Migration* (GCM) through a vote at the United Nations General Assembly. Its fifth objective is to “Enhance availability and flexibility of pathways for regular migration” where the signatories committed themselves to

“adapt options and pathways for regular migration in a manner that facilitates labour mobility and decent work reflecting demographic and labour market realities, optimizes education opportunities, upholds the right to family life, and responds to the needs of migrants in a situation of vulnerability, with a view to expanding and diversifying availability of pathways for safe, orderly and regular migration” (International Organization for Migration (IOM), 2018).

To meet this objective, the GCM specifies a number of necessary interventions: (i) develop labour supply to meet the demands of the labour market; (ii) invest in skills formation and recognition of qualifications; and (iii) conclude new bilateral, regional, or multilateral agreements.

An example of such an agreement was included as one of the only concrete new policy proposals in the GCM (in Objective 18): a Global Skill Partnership. A Global Skill Partnership is a bilateral labour migration agreement between equal partners. The country of destination agrees to provide technology and finance to train potential migrants with targeted skills in the country of origin, prior to migration, and gets migrants with

precisely the skills they need to integrate and contribute best upon arrival. The country of origin agrees to provide that training and gets support for the training of non-migrants too—increasing rather than draining human capital.

A defining feature of the Global Skill Partnership is what is called the “dual track” model (Clemens, 2015). At the start of, or during, the training, the trainees can pick which track they want to go down: a “home” track for non-migrants and an “away” track for migrants. Those who choose to stay are plugged back into the local labour market, with increased skills and earning potential. Those who choose to move also have increased skills and earning potential, and the ability to migrate legally and safely. They could also be provided with additional training in soft skills, for example in different languages or other facets of integration.

Employing this “dual track” approach helps alleviate concerns about “brain drain” within the country of origin. It also creates opportunities to think creatively about financing such implementation. In the idealized form of the model, the fiscal burden of training those on both tracks is shared between the prospective employers and the trainees, possibly through an income-contingent loan. The training of those on the “home” track could be subsidized by those on the “away” track, thus creating incentives for some to opt to remain at home. The above assumes that trainees know *ex ante* whether they will emigrate, and that the incentives will be sufficient to induce the appropriate number of trainees to choose the “home” track option.

The GCM received a rocky reception within the high-income countries of the Pacific Rim. While New Zealand eventually adopted the text, Australia abstained, and the Trump Administration of the United States joined four other countries in voting against it. Australian Prime Minister Scott Morrison argued that signing the GCM would “compromise our successful way of doing things.”⁵ Instead, the Government of Australia has chosen to pursue bilateral arrangements to manage cross-border mobility (see Chand and Markowski, 2018). The United States may do the same, with Central America (Clemens, 2021). The Pacific Skills Partnership, as explained in the next section, could in fact become one of the “successful way[s] of doing things” that Prime Minister Morrison referred to. Ironically, the Pacific Skills Partnership embodies most of the core tenets of the GCM and directly implements its Objective 18.

The Australia Pacific Training Coalition (APTC)

The shortages of skilled workers within the low-income countries of the Pacific Islands arise due to supply and demand imbalances, particularly within “mid”-skill professions. There is low public investment in TVET, with the “[t]he quality of TVET [being] below the expectations of employers for reasons including outdated

⁵ See report posted by Henry Sherrell on March 15, 2019 from *The Parliament of Australia* dated and accessible at: https://www.aph.gov.au/About_Parliament/Parliamentary_Departments/Parliamentary_Library/FlagPost/2019/March/Australia_and_the_Global_Compact_on_Migration

equipment and training programmes, low quality of teachers, and a lack of alignment of training to labour market needs” (ILO, 2017: p 8). Apprenticeship schemes are only available in Fiji and Papua New Guinea (PNG) and the annual intakes into these schemes are small, as are their labor markets. If these small numbers migrate, this leaves the enterprise vulnerable to collapse. In addition, employers are largely disengaged from the design and delivery of training programmes, meaning those who graduate do not have the skills needed for employment in the local markets, causing low demand for locally trained workers.⁶

Prominent among the TVET institutions that do exist is the University of the South Pacific (USP), established in 1968 to provide university education to students from a dozen member nations.⁷ Since then, Fiji, Samoa, and the Solomon Islands have established their own national universities. In PNG, both the University of Papua New Guinea (UPNG) and the University of Technology (UNITECH) were established in 1965. All of these institutions were initially established to primarily serve the needs of their local labour markets.

A series of investments have also been made to upskill Pacific youth for overseas employment. This commenced with KANI in 2004, which led to the establishment of the Australia Pacific Technical College (APTC) in 2007. While KANI was created to produce nurses principally for foreign employment, APTC was created to increase the supply of skilled workers for both the domestic and international markets. It was conceived at the 36th Pacific Islands Forum Meeting, held in Port Moresby, PNG, from October 25–27, 2005. The meeting was attended by the Heads of State of Australia, the Cook Islands, Federated States of Micronesia, Fiji, Kiribati, Nauru, New Zealand, Niue, PNG, the Republic of Marshall Islands, Samoa, the Solomon Islands, Tuvalu, and Vanuatu together with representatives of the governments of Palau and Tonga. The proposal for the APTC originated from the review of the *Pacific Plan*⁸ which argued for the need to:

“expand regional technical and vocational education training (TVET); ensure the portability of technical qualifications; and to support Australia’s offer to investigate the potential of setting up in the Pacific region an Australian Pacific Islands Technical College” (Pacific Islands Forum Secretariat (PIFS), 2005: paragraph 4).

The APTC was officially established two years later in 2007. The purposes of the APTC were to:

“(a) provide Pacific Islander women and men with Australian qualifications that present opportunities to be able to find employment in targeted sectors nationally and internationally”

⁶ As reported by industry representatives at the *Pacific Skills Summit* held in Suva in 2019.

⁷ The member countries of the University of the South Pacific (USP) are Cook Islands, Fiji, Kiribati, Marshall Islands, Nauru, Niue, Samoa, Solomon Islands, Tokelau, Tonga, Tuvalu, and Vanuatu.

⁸ The *Pacific Plan* emerged out of the Pacific Islands Forum Leaders Meeting held in Auckland, New Zealand, in 2004 and was endorsed by the leaders at their 2005 meeting as a means to “strengthening regional cooperation and integration” (Pacific Islands Forum Secretariat (PIFS), 2007).

and,

“(b) support skills development in the Pacific in response to labour market requirements”
(Johanson et al., 2014: pp. 1-2).

This mandate is what distinguished APTC from the USP. The USP, given its regional character, was already producing graduates for a dozen nations, but without an explicit mandate to do so, whereas APTC was tasked with producing skills explicitly for emigration.

Training was to be delivered through five schools—automotive, manufacturing, construction and electrical, tourism and hospitality, and health and community services—for students from 14 Pacific Island countries. Campuses were established in five countries (Fiji, PNG, Samoa, Solomon Islands, and Vanuatu) with a Regional Head Office in Suva, Fiji.⁹ As agreed to at the 2005 Pacific Islands Forum, the Australian Government provided funding for the APTC that was extended over three stages; the first extending from mid-2007 to mid-2011 to the tune of AU\$134 million; the second stage from mid-2011 to mid-2015 with a grant of AU\$143 million; and the third stage at an estimated cost of AU\$129 million, which is due to expire in mid-2026 (Curtain, 2019a).¹⁰ The majority of students attend on DFAT-funded scholarships, though there is a push to increase the amount of self-funding to make APTC more financially sustainable and decrease reliance on aid (DFAT, 2017d).

The APTC was created within the spirit of regional cooperation and market integration, as espoused under the *Pacific Plan*. The investments from the Australian Government were to foster skills creation for both local and foreign employment. The pathways provided for emigration of skilled workers from the Pacific Islands to Australia were identical to those available to aspiring skilled migrants from the rest of the world, thus preserving the non-discriminatory points system used by the Australian Government.

The achievements of the APTC are mixed. As at mid-July 2021, it has enrolled over 18,000 students, of which 15,892 have gone on to successfully complete their programs. They have an employer satisfaction rate of 98 percent and a student satisfaction rate of 98 percent. Yet their success in facilitating skilled emigration is poor. While the original cost-benefit analyses of the APTC envisioned that approximately 50 percent of graduates would migrate to Australia or New Zealand, by 2014 a meagre 1.2 percent had done so (Clemens, 2015: pp. 12-13). By mid-July 2021, that figure had only marginally increased to 5 percent. More troubling still, their graduate tracer survey, run between 2011 and 2019, found that 45 percent of graduates are struggling to find work and that this percentage is increasing over time (Curtain and Howes, 2021).

⁹ All information about the APTC and its outcomes has been sourced online at <https://www.aptc.edu.au>.

¹⁰ APTC was renamed the ‘Australia Pacific Training Coalition’, and its budget is available at <https://www.dfat.gov.au/about-us/business-opportunities/Pages/investment-design-australia-pacific-training-coalition>

There are several reasons for this limited performance. Graduates struggle to access the Australian labour market due to a lack of alignment with Australian visa programs, the costs and requirements of migrating, and concerns of “brain drain” from local employers in the Pacific. Yet this means that APTC is creating more graduates than the local labour markets can employ, hence the poor (and worsening) employment outcomes detailed above (Curtain and Howes, 2021). The APTC has clearly succeeded as a scheme to subsidize the formation of vocationally-skilled human capital in the Pacific region; but it was also created explicitly as a scheme to enhance regional labour mobility, and in that dimension its progress has been small.

Phase 3 of the APTC has attempted to tackle these problems by augmenting its structure to mirror a regional version of the Global Skill Partnership model—a Pacific Skills Partnership. Students can now choose whether to pursue a “home” track or “away” track, with training then aligned with local or international labour markets. The “away” track consists of students who intend to take steps to migrate in the next five years and will therefore receive additional training in preparation for work abroad (CGD, 2021).

The Australian Government has set up a sister program, the Pacific Labour Facility (PLF), to support Pacific Island workers to find job opportunities in Australia. The Pacific Labour Scheme (PLS), implemented by the PLF, has an end-to-end focus on circular labour mobility. The success of the APTC in supplying Pacific Islanders for the PLS depends on its close working relationship with the PLF. The PLF is taking charge of most of the administrative burden, creating a portfolio of “work-ready” potential Pacific Island workers to share with prospective Australian employers, and aligning these pools to ensure workers aren’t taken out of essential jobs in their countries of origin.

Yet these actions may not be enough to overcome the barriers listed above. To begin with, the PLF has a monopoly on placement of workers from the Pacific Islands, while the visa (subclass 403) granted restricts employment to the sponsor alone, limits the stay to three years, and prohibits workers from bringing in their family. It has been difficult to align training and skills qualifications to meet labour market needs, manage participant expectations, and coordinate across countries of origin and destination (CGD, 2021). The financial sustainability of the APTC is also in question, with Curtain (2019a) concluding that the reliance on Australian funded scholarships in the first two stages of the program “has not been consistent with a demand-driven system and [thus] not sustainable over time” (ibid: p. 2). Finally, questions remain as to whether the addition of the stock of skilled workers at home is sufficient compensation for the loss of the quality of workers to Australia and New Zealand.¹¹

¹¹ A trade official from Fiji explained that the migration of three chefs from Fiji to Australia via the Pacific Labour Scheme (PLS) in 2019 was already raising complaints from their employers of the risk of losing their best employees and thus posing a threat to Fiji’s competitiveness in tourism.

Potential economic gain from expanding skilled emigration

As described above, to date, low-income Pacific Island countries have been largely unable to expand skilled emigration by better linking the skills learned through TVET investments and the job opportunities available in the high-income countries of the Pacific Rim. The following section explores what the private rate of return to trainees could be if such a linkage was established. To do this, we analyse the costs of acquiring qualifications and the eventual remuneration for specific occupations.

Given time and resource constraints, our analysis will focus on a set number of countries and occupations. Our focus countries will be Australia, Cook Islands, Fiji, New Zealand, PNG, Samoa, and the Solomon Islands. Australia because of its size and international significance as a labour-importing nation (Miller, 1999); Cook Islands given the free access this island nation has to the labour markets of New Zealand (and through to Australia) (Loomis, 1990); Fiji and Samoa because of the large role remittances play in their economies (Chand and Clemens, 2008; McKenzie, 2006; Voigt-Graf, 2003); and PNG and the Solomon Islands as significant importers of skilled workers, particularly in mining (Imbun, 1997).

Our focus occupations will be three “mid”-skill professions: accountants, computer science graduates, and chefs. These professions were chosen for two reasons. The first is the comparability of the primary qualifications that are required for the occupation and the second is the portability of the skill across national borders. The Australian and New Zealand Standard Classification of Occupations Code (ANZSCO) is used to link occupations across jurisdictions on the basis of skills required and the duties performed. In the case of accountants, for example, an undergraduate qualification is necessary to be recruited as a graduate accountant, this being the first rung of the profession. Professional membership is awarded by the guild after acquiring post-graduate qualifications and a minimum of three years of work experience at an accredited firm. Computer scientists, similarly, require an undergraduate qualification to enter the profession as a graduate but they do not have a guild or a structured program to attain professional accreditation. Finally, chefs require tertiary qualifications at the level as prescribed by the *Australian Qualifications Framework* of an Associate Degree, an Advanced Diploma, or a Diploma, but work experience of at least three years may substitute for the formal qualifications.

Surveys on total remuneration by occupation across jurisdictions is prone to several risks. The literature points to the fact that any estimate of market wage is dependent on the sample of employers who are surveyed, the match between the jobs being surveyed with the occupation being linked to, control of the field survey, the data collection/collation process, and the extent to which indirect or fringe benefits are included in figures for total remuneration (Rynes and Milkovich, 1986: p. 78). A further risk that is specific to small and highly fragmented labour markets as those within the Pacific Islands is that of market power; both employees with scarce skills and employers with monopsony over particular occupations may set their price

rather than be price takers (see Blau and Kahn, 1996, within the context of gender wage gaps in the USA). Mitigating these risks demands careful research design, which we turn to next.

Research Design

In this research, we aim to estimate three parameters: (i) the value of the marginal product of an Australian quality worker in a Pacific Island country; (ii) the marginal cost of training an Australian quality worker in their home country; and (iii) the factor for economic arbitrage through international mobility of skilled workers.

On the first, we use the market wage of an “Australian quality” worker in their home country, where “Australian quality” will be established through both formal qualifications and work experience linked via ANZCO. On the second, the average costs of tuition for a local student to acquire the training at home will be used as being equal to the marginal cost of training.¹² A necessary condition for an unbiased estimate of both these parameters through the strategy explained above requires that the market for the skills and that of providing the qualifications are competitive, a condition unlikely to hold in small island nations. The impact of this bias on the estimates is discussed following the empirics.

On the third, we derive this from the estimates of (i) and (ii). Room for economic arbitrage emanates from two sources: first, in terms of gaps in remuneration across national borders, and second, in terms of gaps in the costs of acquiring the relevant qualifications for the chosen occupation. An assumption critical to the estimation of the factor for arbitrage through skilled migration is that the quality of workers is homogenous as is the quality of training.

There are two approaches to collecting the requisite data on wages of a worker with given skills (rather than qualifications) across countries: approach them directly or approach their employers. An inherent difficulty with both these approaches lies in identifying workers of homogenous skills; addressing this across national borders is particularly problematic.

In this analysis, we use the second of these approaches. This strategy requires clear decision rules for inclusion of employers, ensuring that employers recruit “Australian quality” professionals, operate across national borders, and, to the extent possible, recruit both from home and foreign (preferably Australian) training providers. The process for identifying these employers is described in more detail under each of the occupation categories below.

¹² The average cost will equal marginal cost at efficient scale only.

Once we chose these employers, we identified one influential contact (often a human resources professional) for an interview. After introducing the purpose and structure of the research, we invited them to participate in the survey. For each of the occupations, we asked (1) how much typical *local* workers earn in that occupation at that employer; (2) which *local* training institution they were trained at; and (3) some standardized qualitative information for assessment of worker quality by the respondent. Three collaborators were recruited and trained to conduct detailed interviews with people knowledgeable about workers in the organization. A total of eleven major employers operating across national borders employing the accountants, computer science graduates, and chefs were interviewed.

As an example, the HR manager of an international hotel chain was interviewed to collect data on remuneration and sources of qualification of their accountants, computer science personnel, and chefs. The remuneration data collected from these interviews were then supplemented with information collated from national surveys conducted by three international human resource companies: *Hays PLC*, *Merger Global*, and *Peopleconnexion*. The above left a void for the Solomon Islands, thus a special request was made to the Central Bank of the Solomon Islands which conducted a phone survey to supplement the data on remuneration for accountants, computer science graduates, and chefs in the nation. The information collected through these alternative channels was finally cross-checked with information collected on similarly qualified employees from LinkedIn.

Based on the answers to question (2), we then collected the cost of acquiring the qualifications held by the worker surveyed using the websites of the respective training institutions. To ascertain whether the wages paid by the employer were indicative of national averages, we also used national surveys to find the starting salaries (inclusive of benefits) for three graduate profiles (accountants, computer science professionals, and chefs with Certificate III qualifications).

Analysis

Accountants

The first survey was conducted for graduate accountants. This choice was made with four considerations:

1. Accounting qualifications are provided by many local universities, while few Pacific Islanders acquire these same qualifications in Australia and New Zealand;
2. Accounting graduates are employed in the public, private, and multinational sectors and are thus exposed to the competitive forces of the market;
3. The job descriptions for accounting graduates are similar across countries and match closely with the ANZCO code; and

4. The process of acquiring professional accreditation by the graduates are similar across countries with the average length of time taken to qualify as either a Chartered Accountant or a Certified Practising Accountant being five years.

The survey revealed that accounting graduates are employed within three broad sectors; namely, the private sector (e.g. multinational accounting firms like BDO, Deloitte, Ernst & Young (EY), KPMG, PricewaterhouseCoopers (PwC)), the public sector, and non-for-profit (international organizations). The multinational accounting firms provide accounting and auditing services, as required by legislation for large publicly listed corporations, within the jurisdiction. These services are similar across jurisdictions as they draw on common international standards such as the *Generally Accepted Accounting Principles* in the USA and those mandated by the *Australian Accounting Standards Board*.

Table 1. Total annual remuneration of accounting graduates, 2018/19

Country	Currency	Total Annual Remuneration				
		<i>LQ (LC)</i>	<i>Median (LC)</i>	<i>UQ (LC)</i>	Median (AUD)	Percent (AUD)
Australia	AUD	69,250	77,058	89,662	77,058	100
New Zealand	NZD	55,000	72,500	90,000	68,150	88
Fiji	FJD	17,000	19,500	22,000	13,065	17
PNG	PGK	32,500	45,300	49,700	20,838	27
Solomon Islands	SBD	31,680	39,059	46,438	7,421	10

Source: Australia: Mercer TRS Survey (2020), data is for entry professionals (Position code: FIN.06.000.P10); New Zealand:

<https://www.careers.govt.nz/searchresults?tab=jobsandq=Accountant>; Fiji: Survey data; PNG: PPX, data for 2018 for position of General Accountant; Solomon Islands:

Survey data provided by the Central Bank of Solomon Islands.

Note: LC denotes local currency and AUD is Australian dollars. No data for the Cook Islands or Samoa is available.

Table 1 shows data on total remuneration for an “Australian quality” graduate accountant. It gives the lower-quartile (LQ), median, and upper-quartile (UQ) for total remuneration of accounting graduates in the first year of employment across the six countries in our sample. The second to last column on the far right reports the median total remuneration in Australian dollars, and the far-right column reports the median remuneration for a graduate accountant as a percentage of the Australian value. These values depend on the prevailing exchange rate, and in this case the prevailing rate of May 15, 2020 was used.

The information presented in Table 1 is for the country as a whole, thus extends across the private, public, and not-for-profit sectors, as well as across (small) local firms and (large) multinational enterprises. The median figures, while representative of the country as a whole, reflect the varying composition of these sectors across the sample of countries. Consequently, median values would be comparable across countries

only in the (unlikely) event of uniform composition across the sample. Notwithstanding this limitation, the starting salaries of accounting graduates in New Zealand are 12 percent lower than their counterparts in Australia and short by some 90 percent in the Solomon Islands.

A means to controlling for compositional effects is to consider total remuneration of accounting graduates by sector. Table 2 presents information similar to that in table 1, but this time drawing on data collected from a purpose designed survey.¹³ Total remuneration is reported across the private, public, and not-for-profit sectors. The private sector is restricted to large multinational accounting firms while the not-for-profit sector is that for the agencies of the United Nations only.

Table 2. Total annual median remuneration of accountants, AUD

Country	Private Sector (Multinational)	Public Sector	Not-for-Profit (International)	Percent (AUD)
Australia	60,000	55,000	60,000	100
New Zealand	48,000	54,450	59,400	80
Fiji	12,672	14,256	27,720	21
PNG	23,500	22,560	28,200	39
Solomon Islands	7,424	7,628	16,800	12
Samoa	14,000	8,960	17,920	23
Cook Islands	34,650	35,118	39,600	58

Source: Survey data except for New Zealand where data from Robert Half (2020) Salary Guide for the Private Sector has been used.

The figures for median remuneration reported in Table 2 are broadly similar to those in Table 1, and possibly closer to the figures for the lower quartile in the former. This difference could be because of the different composition of sectors employing graduate accountants. The differences across the three sectors in terms of total remuneration, as quantified by the coefficient of variation (c.v.), is the highest for the public sector (c.v. of 81 percent), and the lowest for the not-for-profit international sector (c.v. of 56 percent), with the multinational private sector falling in-between (c.v. of 78 percent). Between these sectors, it would be reasonable to assume that the multinational accounting firms employ similarly skilled graduate accountants, and that their competencies would be of “Australian quality” given that these firms use international accounting standards. Drawing on the above and the data provided in the second column of Table 2, a graduate accountant in an international accounting firm in Fiji earns 19 percent of the remuneration of their Australian counterpart while the corresponding figures for other countries are Cook Islands (58 percent), the Solomon Islands (12 percent), PNG (39 percent), Samoa (23 percent), and New Zealand (80 percent).

¹³ Approval from the Human Research Ethics Panel of the University of New South Wales was secured for the survey; approval number HC190891.

We asked survey respondents if they paid graduates differently depending on the institutions where they acquired their qualifications. All answered in the negative. It is however possible that employers prefer some institutions over others, but they paid the same once the graduate was hired.

(a) Total cost of training an “Australian quality” graduate accountant

The second parameter to be estimated is that of the marginal cost of producing an “Australian quality” accountant. The total cost of upskilling a high school graduate to an accountant includes the costs of university tuition, board, incidental expenses while at university, and the foregone income during the period of study. Collecting data for each of the above is a demanding exercise and one left for future work. Our analysis is confined to collating data on the tuition and boarding costs from the local universities which we assume would make up the bulk of the direct costs of university education.

A bachelor’s degree in accounting is offered at the USP, the Fiji National University (FNU), the University of Papua New Guinea (UPNG) and the University of Technology (UNITECH) (which caters to students from PNG and the Solomon Islands). Students from the Pacific Islands also undertake further education in Australia and New Zealand, but this is generally privately funded as scholarships are not awarded for accounting studies. Given the high costs of these programs, the majority of accounting graduates are trained either at the local university or the regional USP.

Table 3 provides data on the costs of acquiring a bachelor’s degree by a local student majoring in accounting in Australia, New Zealand, Fiji (FNU and USP), Cook Islands (USP), PNG (UPNG and UNITECH), the Solomon Islands (USP, UPNG, and UNITECH), and Samoa (USP).¹⁴ The tuition fee applied for Australia is that of a student on the Commonwealth of Australia support program. Universities in New Zealand set their own fee; the figures used here are those for the three-year Bachelor’s degree in Commerce at Auckland University, and the accommodation charges are those for Victoria University in Wellington.¹⁵ The costs are divided into tuition fee and accommodation charges as levied by the institution. Tuition fee and accommodation charges for FNU are those for domestic students while those for USP are for students from the member nations. The figures used are for a local student not granted any waivers on tuition who is able to complete the qualification in the minimum period of study. The minimum period of fulltime study to graduate with an accounting degree takes three years in all of the institutions except the two in PNG where it takes four years.

¹⁴ The National University of Samoa only offered a Bachelor’s in Commerce program in 2016 with first graduates produced in 2019; thus, is excluded from this analysis.

¹⁵ Accommodation charges in Auckland are the highest in the nation while those in Wellington are better reflective of the median costs.

Table 3. Costs of acquiring accounting qualifications, AUD

Country	Tuition	Percent (AUD)	Accommodation	Percent (AUD)	Total	Percent (AUD)
Australia	31,320	100	58,320	100	89,640	100
New Zealand	18,950	61	49,767	85	68,718	77
USP	13,561	43	5,383	9	18,944	21
FNU	8,393	27	13,919	24	22,312	25
UPNG	18,505	59	15,754	27	34,259	38
UNITECH	24,884	79	10,588	18	35,472	40

Source and note: On-campus accommodation provided at USP, unlike its counterparts, does not include catering. Costs are: Australia: three-year program for Commonwealth Supported Programs, set maximum fee of \$10,440 per year for Band 3 courses, 2017 figures; New Zealand: three-year BCom program worth 360 credit points for 24 courses at a minimum fee of \$840 per course for domestic students at the University of Auckland, accommodation from Victoria University of Wellington see https://www.vuw.ac.nz/_data/assets/pdf_file/0006/1667481/catered-halls.pdf; FNU: three-year full-time study for the degree; USP: three-year full-time study for the degree; UPNG: four-year fulltime study for students from the South Pacific at Waigani campus inclusive of compulsory student fee; and, UNITECH: four-year degree for BCom degree from the Pacific with a Corporate sponsor.

The figures in Table 3 show large variation in both tuition fees and accommodation costs across the country sample, with tuition costs at FNU being the lowest at approximately 27 percent that of Australia. However, accommodation costs across institutions are not strictly comparable for two reasons at least: (i) the quality of housing provided differs greatly across institutions; and (ii) the quality of catering also varies, with USP not providing any catering to the students housed on campus. This helps explain the low figure for costs of accommodation for USP reported in Table 3.

(b) Factor for economic arbitrage for producing an “Australian quality” accountant

We use the differences in total remuneration across our country sample for graduate accountants and the costs of acquiring the qualifications to calculate the opportunities for economic arbitrage. Table 4 provides data on the costs of acquiring an accounting qualification in terms of the number of years of (median) total remuneration following graduation.

For a Fiji Islander student taking studies at the FNU, this equates to 0.66 for tuition alone (shown in third row and second column of Table 4) and 1.76 when tuition and accommodation charges are both included (see corresponding cell in Table 5). A student from Cook Islands could study at FNU at a cost of 0.24 years of total remuneration but s/he would not qualify as a local, thus the shaded cells in Table 4 reveal the choices of institutions available to citizens from the respective nations. USP, being a regional university, charges the same fee to students from each of its member nations; in this case, those from Cook Islands, Fiji, Samoa, and the Solomon Islands.

Table 4. Years of remuneration in country to pay for accounting tuition, AUD

Country	FNU	USP	UPNG	UNITECH	NZL	AUS
Australia	0.14	0.23	0.31	0.41	0.32	0.52
New Zealand	0.17	0.28	0.39	0.52	0.39	0.65
Fiji	0.66	1.07	1.46	1.96	1.50	2.47
PNG	0.36	0.58	0.79	1.06	0.81	1.33
Solomon Islands	1.13	1.83	2.49	3.35	2.55	4.22
Samoa	0.60	0.97	1.32	1.78	1.35	2.24
Cook Islands	0.24	0.39	0.53	0.72	0.55	0.90

Notes: Highlighted cells are those available to domestic students.

Considering the tuition fee alone first given the superior quality of this data, the figures in Table 4 reveal that an Australian student (if treated as a local) could meet the tuition costs of acquiring a BCom degree at FNU for 14 percent (i.e. approximately two months) of their annual post-qualifying total remuneration. At the opposite extreme is the case of a Solomon Islander who would (if treated as a local) need to spend 4.22 years of their post-qualifying total remuneration on tuition fees alone to acquire a BCom degree in Australia. All else equal, a Fijian with the freedom to choose institutions to study solely on the basis of tuition fee would study at FNU, which costs 66 percent of their annual Fiji-remuneration after graduating. If that same Fijian was able to work in Australia, they could pay the tuition charges off with 14 percent (less than two months) of their annual remuneration. Alternatively, a Fijian taking up studies for BCom in Australia would need to value this qualification as being roughly four-fold better than from the FNU and at least twice as good as that of USP. For the sample as a whole, the factor for economic arbitrage is 30, which in itself is the product of the room for arbitrage in acquiring the qualification and that in earning remuneration after graduating (i.e. $4.22/0.14 = \text{Tuition}_{\text{AUS}}/\text{Tuition}_{\text{FNU}} \cdot \text{TR}_{\text{AUS}}/\text{TR}_{\text{Solomon Is.}}$). In summary, acquiring accounting qualifications is cheap at the FNU, while earnings for accountants are large in Australia.

Why are these opportunities for arbitrage not realized? There could be many reasons, including the fact that aspiring accountants do not have full choice over all cells in Table 4. An Australian, for example, cannot study at FNU as a local. The cells which are available to locals are shaded and for these the factor of arbitrage is considerably lower. As an example, Fijian students may study at the FNU or the USP, and the factor for economic arbitrage is 1.6 (i.e. $1.07/0.66$); similarly, those from PNG have a factor of arbitrage of 1.34 (i.e. $1.06/0.79$); and Australians and New Zealanders who may study in either nation as locals have a factor of arbitrage of 2.03 (i.e. $0.65/0.32$).

While the salaries for graduate accountants at the multinational accounting firms are independent of the training institution, there could be non-pecuniary benefits from being trained at one local institution versus another. The entry thresholds may be different; thus, the institutions may be rationing places by entry scores rather than tuition fees. USP, for example, is regionally owned and 52 years old whereas FNU is owned by

the Fijian government and has been operating for a decade.¹⁶ Further, employers may give preference to hiring from one institution versus another but pay graduates the same once they have been recruited.

We next consider the total of tuition and accommodation costs, notwithstanding the problems with comparing accommodation costs across institutions. Table 5 provides analogous data to Table 4, but with the addition of accommodation costs. The costs of accommodation used are those as reported by the institutions, but these must be interpreted with care as many students stay outside of campus and the levels of services such as housekeeping and catering plus the quality of housing differs enormously across tertiary institutions. This augmentation does not alter the qualitative conclusions drawn from Table 5. That is, the large variability in costs of upskilling differ greatly across institutions, and even more so across countries.

Table 5. Years of remuneration in country to pay for accounting tuition and accommodation

Country	FNU	USP	UPNG	UNITECH	NZL	AUS
Australia	0.37	0.32	0.57	0.50	1.15	1.49
New Zealand	0.46	0.39	0.71	0.63	1.43	1.87
Fiji	1.76	1.49	2.70	2.38	5.42	7.07
PNG	0.95	0.81	1.46	1.29	2.92	3.81
Solomon Islands	3.01	2.55	4.61	4.07	9.26	12.07
Samoa	1.59	1.35	2.45	2.16	4.91	6.40
Cook Islands	0.64	0.55	0.99	0.87	1.98	2.59

Note: Highlighted cells are those available to domestic students.

Two additional observations may be made from the evidence presented in Table 5. First, the tuition fee for acquiring an accounting degree in Australia and New Zealand as a proportion of the total remuneration following graduation is lower than that in the rest of the nations except for Cook Islands: an exception that may be explained by the fact that residents of Cook Islands have free access to labour markets of both Australia and New Zealand thus command higher remuneration at home. Second, the figures in Tables 4 and 5 reveal that the largest room for arbitrage through mobility of accounting graduates resides in the non-shaded cells; that is, when students and graduates are allowed to cross national borders.

Computer science professionals

Analogous to graduate accountants, the data presented next is that for the total remuneration of computer science graduates at the commencement of their careers within the private sector. The ANZCO occupational

¹⁶ FNU was created in 2009 following amalgamation of six long-established Fiji-government owned institutions: the Fiji School of Medicine (est. 1885); the Fiji School of Nursing (est. 1893); the Fiji College of Advanced Education (est. 1947); the Fiji College of Agriculture (est. 1954); the Fiji Institute of Technology (est. 1963); and the Lautoka Teachers' College (est. 1978).

codes for computer science professionals are 2611–2613, 2621, 2631–2633, 2211, and 5511. The median total remuneration of a computer science professional at the beginning of their career in Australia is \$61,756; the corresponding figure for Cook Islands is \$53,862 (i.e. 87 percent of the Australian salary), Fiji \$27,662 (45 percent), New Zealand \$52,170 (84 percent), PNG \$27,600 (45 percent), and the Solomon Islands \$8,823 (14 percent).¹⁷

A degree majoring in computer science in Australia takes three years of full-time study, and for locals incurs tuition costs of \$26,751 (as a Band 2 course under the Commonwealth of Australia supported program). A similar course at FNU costs \$7,144 (i.e. 27 percent of the Australian fee), at UNITECH \$24,700 (94 percent), at UPNG \$21,633 (81 percent), and in New Zealand \$26,666 (roughly 100 percent of the Australian fee).

The factor of arbitrage for a computer science graduate from UPNG commencing work in Australia on the assumption that their qualifications are considered to be of “Australian quality” is 2.24 (i.e. \$61,756/\$27,600). In terms of tuition costs, that is 1.24 (i.e. \$26,751/\$21,633) with the total factor for arbitrage being equal to the product of these which equals 2.28. A reason for the higher tuition costs at UPNG is that it takes four years of full-time study to graduate with a computer science degree while it takes a year less at the other institutions.

Table 6 gives the costs of tuition in terms of the years of total remuneration for a graduate when they start work in their country.

Table 6. Years of remuneration in country to pay for computer science tuition

Country	FNU	USP	UPNG	UNITECH	NZL	AUS
Australia	0.12	0.22	0.35	0.40	0.43	0.43
New Zealand	0.14	0.26	0.41	0.47	0.51	0.51
Fiji	0.26	0.50	0.78	0.89	0.96	0.97
PNG	0.26	0.50	0.78	0.89	0.97	0.97
Solomon Islands	0.81	1.56	2.45	2.80	3.02	3.03
Cook Islands	0.13	0.25	0.40	0.46	0.50	0.50

Notes: Highlighted cells are those available to domestic students; survey data on remuneration and tuition fee used for the calculations reported in the table. Data for Samoa is not available.

The largest room for arbitrage is for an Australian to take up computer science studies at FNU which would cost 12 percent of their post-qualifying total remuneration in Australia. But an Australian would not be eligible to study at the FNU as a local. For the shaded cells, tuition at USP in terms of total post-qualifying

¹⁷ All figures in AUD unless otherwise specified.

remuneration is the cheapest for a Cook Islander (with FNU coming close for a Fijian) and the most expensive for a PNG local studying at UNITECH. The potential factor for economic arbitrage is $25 (= 3.03/0.12 = \text{Tuition}_{\text{AUS}}/\text{Tuition}_{\text{FNU}} \cdot \text{TR}_{\text{AUS}}/\text{TR}_{\text{Solomon Is.}})$; that is, an estimate of the gains to a Solomon Islander undertaking studies at FNU as a local instead of in Australia and then working in Australia.

Chefs

Finally, we collate data for chefs. The ANZCO occupational code for chefs is 3513, with the tasks they perform ranging from planning and organizing the preparation and cooking of food in dining and catering establishments. While there are no mandatory qualifications required to become a chef, it is common for them to complete apprenticeship and gained vocational qualification such as a Certificate III in Commercial Cookery (Australian National Course Code SIT30816).¹⁸

We have collected data from major hotels in the respective countries on the starting total remuneration of chefs who have graduated with a Certificate III in Commercial Cookery. The median starting total annual remuneration of a chef in Australia with this certificate is \$61,796 (data from Mercer Survey for entry professionals); the comparable figures for Cook Islands is \$15,679 (i.e. 25 percent of Australian total annual remuneration), Fiji \$10,720 (i.e. 17 percent), PNG \$6,446 (10 percent), Samoa \$6,869 (11 percent), Solomon Islands \$6,299 (10 percent), and New Zealand \$39,104 (63 percent).

This certificate is offered by the APTC campuses in Fiji, PNG, and Samoa; FNU and USP in Fiji; and, Tertiary and Further Education (TAFE) colleges in Australia and New Zealand. Data was acquired from the websites of each institution. The tuition fee varies considerably both across institutions and between countries: the tuition fee at FNU was \$1,570 (equal to 14 percent of the average tuition fee of \$10,900 in Australia); the comparable figures for USP TAFE was \$2,797 (26 percent), Manukau Institute of Technology in Auckland of \$6,768 (62 percent), and TAFE Queensland of \$14,350 (130 percent of the Australian average).

While APTC courses are accredited by TAFE Queensland, the tuition fee differs by country campus;¹⁹ in Fiji at \$3,350 (or 31 percent of the Australian average fee), PNG \$2,392 (71 percent of the Fiji campus fee), and Samoa \$1,620 (48 percent of the Fiji campus fee). Tuition fees at the APTC are pegged to the fee charged by similar providers *in situ*.

¹⁸ See Seek at: <https://www.seek.com.au/career-advice/role/chef>

¹⁹ The APTC notes on its brochure that “Graduates of this course will receive an internationally recognised Australian Qualification issued through TAFE Queensland (RTO 0275)” (see <https://www.aptc.edu.au/courses/courses-info/hospitality-tourism/commercial-cookery>).

Table 7. Years of remuneration in country to pay for chef tuition

Country	APTC (Fiji)	FNU	USP (Pacific TAFE)	APTC (PNG)	APTC (Samoa)	New Zealand	TAFE (QLD)	Australia average
Australia	0.05	0.03	0.05	0.04	0.03	0.11	0.23	0.18
New Zealand	0.09	0.04	0.07	0.06	0.04	0.17	0.37	0.28
Fiji	0.31	0.15	0.26	0.22	0.15	0.63	1.34	1.02
PNG	0.52	0.24	0.43	0.37	0.25	1.05	2.23	1.69
Solomon Islands	0.53	0.25	0.44	0.38	0.26	1.07	2.28	1.73
Samoa	0.49	0.23	0.41	0.35	0.24	0.99	2.09	1.59
Cook Islands	0.21	0.10	0.18	0.15	0.10	0.43	0.92	0.70

Notes: Highlighted cells are those available to domestic students; survey data on remuneration and tuition fee used for the calculations reported in the table.

The first shaded cell in Table 7 shows that the tuition fee for a Fijian student equals 31 percent of their post-qualifying total annual remuneration when the qualification is attained from the Fiji campus of APTC, 15 percent if the same is acquired from FNU, and 26 percent if from USP’s Pacific TAFE. For the whole table, the potential factor for economic arbitrage is a whopping 76 ($= 2.28/0.03 = \text{Tuition}_{\text{TAFE QLD}}/\text{Tuition}_{\text{APTC Samoa}} \cdot \text{TR}_{\text{AUS}}/\text{TR}_{\text{Solomon Is.}}$) That is, if a student from the Solomon Islands studies at the Samoa campus of the APTC and then works in Australia, the tuition fee will cost less than two weeks of their post-qualifying total annual remuneration.²⁰

In summary, the economic benefits that could be accrued if students were able to access training at the most competitive Pacific Island provider, and then move to a market offering the maximum remuneration, are very large. These benefits are so large that they are likely to overwhelm potential errors in data collection or from imperfections in the competitiveness of the labour markets. That said, the data shows the greatest difference lies in the amount of remuneration the graduate can receive, rather than the cost of acquiring the requisite formal qualification. We must then consider why more skilled migration does not occur throughout the Pacific, and how the APTC could be complemented or enhanced to realize this opportunity.

Facilitating skilled migration through a “Pacific Skills Visa”

Despite the vast potential for economic arbitrage outlined above, the fact remains that there is little skilled migration taking place between the various countries of the Pacific. One potential reason for this may be a lack of alignment between the legal immigration systems of countries of destination such as Australia and New Zealand, and countries of origin throughout the region. As discussed above, the third phase of APTC

²⁰ Tuition at TAFE Queensland is 8.86 times that at APTC (Samoa) while total remuneration in Australia is 9.81 times that in the Solomon Islands with the product of these margins equalling 86.90; the difference noted above is due to rounding of the figures reported in table 7.

has attempted to work with the PLF to ensure their graduates have access to the Australian labour market. While this belated alignment is welcome, a more market-driven scheme could unleash much greater regional benefits.

Currently, APTC focuses on the training of youth across the Pacific Islands and the PLF focuses on the placement of graduates in Australia. Australian taxpayers fund both of these operations. In the APTC Phase 3 Design Document, this was noted by DFAT as both unsustainable and undesirable (DFAT, 2017d), and the same could apply to the PLF. In addition, this reliance on an externally supported training system distorts the market for TVET provision throughout the Pacific Islands and provides few incentives for local providers to improve the quality of their own training. This was also noted in the Design Document, with a view to slowly phase out APTC over the coming years and invest more in improving the capacity of local training institutions (*ibid.*).

If graduates produced by these local training institutions were able to access international markets, this would, as suggested by the room for arbitrage shown above, have substantial benefits for the economies of the Pacific Rim. An ecosystem comprising private providers of TVET competing for clients who in turn select providers and qualifications on the basis of post-qualifying employment is likely to be superior to the current system on three counts at least. First, competition across TVET providers is likely to lift the quality and internationally portability of qualifications while lowering costs. Second, trainees are more likely to select training courses on the basis of employability, both at home and abroad, and particularly so if the cost of this training is be funded from future income (a loan). Finally, an income sharing agreement is likely to lead to a more financially sustainable upskilling ecosystem. The role of governments in such an ecosystem would be one of providing information on employment prospects at home and abroad, underwriting access to targeted loans, and guaranteeing access to international markets through the creative design of visa schemes.

From DFAT documents, it appears this ecosystem is the way in which the Australian government would like to move. Missing, though, is the visa scheme. In the final section of this paper, we outline such a potential scheme: the “Pacific Skills Visa” (PSV).

The Design of the Pacific Skills Visa (PSV)

The PSV is a visa with an initial annual non-binding quota of 10,000 that permits internationally accredited graduates to gain work experience throughout the Pacific, for a temporary period such as three years.²¹ It attempts to implement the spirit of both the Global Skill Partnership and the GCM at a regional level; a true

²¹ It is likely that a temporary visa with a quota would be more politically palatable in the short-term. However, given the enduring skill shortages within the mid-skill occupations outlined above in the high-income countries of the Pacific Rim, it is not inconceivable that a political case could be made for the PSV becoming a permanent visa with no quota.

Pacific Skills Partnership. Effectively, it comes as close as possible to creating a single labour market for skilled workers between the countries of the Pacific.²² Table 8 provides an overview of how the PSV would operate compared with four existing mobility schemes: the Temporary Skill Shortage (TSS, subclass 482); Temporary Graduate Visa (TGV, subclass 485); Seasonal Worker Programme (SWP, subclass 403); and the Pacific Labour Scheme (PLS, subclass 403).²³ Most importantly, family reunification would be allowed (given the large ethical issues with barring such reunification for long-term temporary visas) and workers would not be tied to one employer.

Our proposal is to allow APTC graduates to automatically qualify for the PSV. This same access may be granted to other accredited institutions from the Pacific Islands. This should lead to competition between TVET providers to offer Australian-accredited qualifications that are in demand abroad, thereby improving the quality of training provided while lowering costs. UPNG and UNITECH are already at a disadvantage with their four-year degrees and thus may be forced to match the length of their programs to the competitors. This could also force feeder schools for the tertiary institutions to lift their standards to meet the entry requirements of the accredited institutions, with cascading improvements in quality throughout the education value chain. The number of trainees allowed into these programs is finite, which would act as a natural constraint on the number of people who were able to access the PSV.

Two other features distinguish the PSV from other existing mobility schemes: the participating countries and the financing mechanism.

Alignment with PACER Plus

The PSV would be open to all signatories of the *Pacific Agreement on Closer Economic Relations Plus* (PACER Plus). PACER Plus is a comprehensive World Trade Organization (WTO)-consistent agreement on regional economic integration which covers goods, services, and investment with the purpose of promoting

“economic growth and development in [Pacific Island countries] through strengthening their capacity to trade, to benefit from trade, to facilitate trade and to attract and retain investment.”²⁴

²² Such a partnership is visible in other regions of the world. For example, the 9 of the 11 members of the Caribbean community (CARICOM) allow for free mobility of wage earners who are one of the following: university graduates, media workers, sportspersons, artisans with Caribbean-based vocational qualifications, musicians, professional nurses, qualified teachers, and domestic workers with vocational qualifications (see: <http://immigration.gov.tt/Services/CSME.aspx>).

²³ The SWP and PLS have recently been linked under the Pacific Australia Labour Mobility (PALM) scheme.

²⁴ See Parliament of Australia at: https://www.aph.gov.au/Parliamentary_Business/Committees/Joint/Treaties/NuclearFuel-France/Report_179/section?id=committees_reportint_reportint_024162_reportint_25858; accessed on June 11, 2019.

Table 8. Distinguishing the Pacific Skills Visa (PSV) proposal from existing mobility schemes

	Temporary Skill Shortage (TSS)	Temporary Graduate Visa (TGV)	Seasonal Worker Program (SWP)	Pacific Labour Scheme (PLS)	Pacific Skills Visa (PSV)
<i>Year commenced</i>	2019	2007	2012	2018	Proposed
<i>Country coverage</i>	All	All	Fiji, Kiribati, Nauru, Papua New Guinea, Samoa, Solomon Islands, Timor-Leste, Tonga, Tuvalu, and Vanuatu.	Fiji, Kiribati, Nauru, Papua New Guinea, Samoa, Solomon Islands, Timor-Leste, Tonga, Tuvalu, and Vanuatu.	Signatories of PACER Plus
<i>Age groups</i>	All	Under 50 years	21 years and over	21-45	All
<i>Destination</i>	Australia	Australia	Australia ²⁵	Australia	PACER Plus signatories (Potentially, also Fiji and PNG)
<i>Visa class</i>	482	485	403	403	TBD
<i>Application cost (AUD)</i>	1,265-2,645	1,650	310	310	0
<i>Processing time (75 percent - 90 percent applications)</i>	9-10 months	8-9 months	9-14 days	8-12 days	0
<i>Length of visa</i>	2-5 years	18 months—4 years	Up to 9 months, multiple entry	Three years, multiple entry	Three years, multiple entry
<i>Work limitation</i>	Work only for the sponsor	None	Work only for the sponsor	Work only for the sponsor	None
<i>Annual cap on number of visas</i>	No	No	No	No	Yes
<i>Family allowed</i>	Yes	Yes	No	No	Yes
<i>Sponsoring employer required</i>	Yes	No	Yes—must be approved by the Australian Department of Foreign Affairs and Trade (DFAT) / Department of Education, Skills, and Employment (DESE)	Yes—must be approved by the Australian Department of Foreign Affairs and Trade (DFAT) / Department of Education, Skills, and Employment (DESE)	No
<i>Responsible agency</i>	Australian Department of Home Affairs (DHA)	Australian Department of Home Affairs (DHA)	Australian Department of Education, Skills, and Employment (DESE)	Australian Department of Foreign Affairs and Trade (DFAT)	Australian Department of Home Affairs (DHA)
<i>Skill level</i>	Designated skilled occupations, two years' work experience, skills assessment, English language proficiency	Qualifications on skilled occupation list	“Low”-skilled (ANZSCO levels 4 and 5)	“Low” and “mid”-skilled (ANZSCO levels 3-5)	“Low” and “mid”-skilled (ANZSCO levels 3-5)
<i>Skills assessment</i>	Required	Must have applied for assessment of skills	Not required	Not required	Not required
<i>Labor market test</i>	Required	Not required	Required	Required	Not required
<i>Training costs</i>	Self-funded	Self-funded	Self-funded	Self-funded	Income-sharing

²⁵ New Zealand has a very similar scheme, modelled off the SWP, called the Recognised Seasonal Employer (RSE) scheme. See <https://www.immigration.govt.nz/about-us/research-and-statistics/research-reports/recognised-seasonal-employer-rse-scheme>

Table 8, continued

	Temporary Skill Shortage (TSS)	Temporary Graduate Visa (TGV)	Seasonal Worker Program (SWP)	Pacific Labour Scheme (PLS)	Pacific Skills Visa (PSV)
<i>Industries</i>	Designated	All	Agriculture, Accommodation (selected locations only)	Agriculture, Aged Care, Fisheries, Hospitality, Meat Works	All
<i>Regions</i>	Separate Regional Occupation List	All	Agriculture—Nationally Accommodation—Western Australia, Northern Territories, Tropical North, Queensland, and Kangaroo Island	Rural and regional Australia	All
<i>Employment laws</i>	Australia	Australia	Australia	Australia	Country of destination
<i>Pathway to residency</i>	Yes	Yes	No	No	Yes

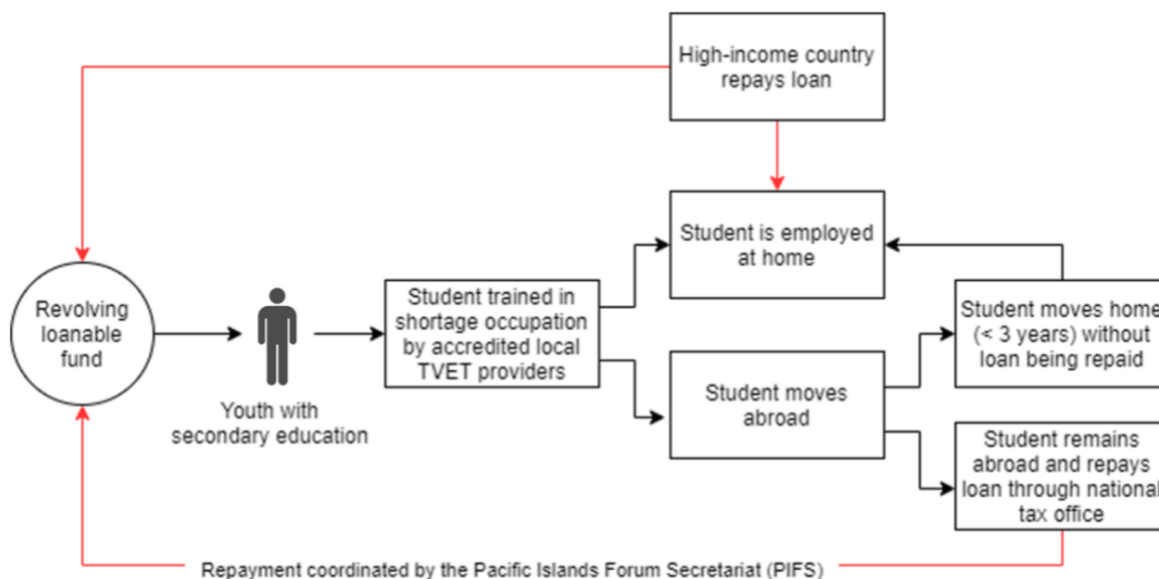
PACER Plus is also meant to facilitate cross-border movement of skilled workers. It has been signed by Australia, Cook Islands, Kiribati, Nauru, New Zealand, Niue, Samoa, Solomon Islands, Tonga, Tuvalu, and Vanuatu. Article 9 of PACER Plus commits the signatories to: “progressively liberalise the movement of natural persons among the Parties” (Chapter 8: Movement of Natural Persons; PACER Plus Agreement) (Government of Australia, 2017c).

Notably, Fiji and PNG (that collectively account for 86 percent of the total population and 88 percent of the GDP of the Pacific Island nations) have yet to sign the agreement, leaving a large potential pool of skilled workers ineligible for the PSV. In addition to implementing the PSV among existing PACER Plus signatories, a small pilot program without Fiji and PNG could be opened. If evaluations show success, the PSV could eventually be expanded to these countries as well.

Income-sharing model

The PSV would employ an income-sharing model when it comes to covering the costs of training. As is discussed above, the Government of Australia has been generous in funding the APTC, including offering scholarships and covering operational costs. But this is far from sustainable and possibly not the best value for money. Per capita costs of producing an APTC graduate are above that of competitors at home and in Australia, though it should be noted that our analysis for chefs above suggests the opposite (Johanson et al., 2014). This is surprising given that the main input into education is manpower which is relatively cheap in poorer countries and points to the need for a closer examination of the reasons for this difference. But given that the costs incurred in setting up APTC are sunk, its future rests on the capacity of the institution to fund its operational outlays.

Figure 1. The PSV income-sharing model



Note: Lines in black denote flows of people, lines in red the flows of finances.

Securing sustainable finance for upskilling of the workforce under the PSV could be addressed through a loan scheme. Both the Fijian and Australian governments provide loans for tertiary education at designated institutions. The Fiji Government’s Tertiary Education Loan Scheme (TELS)²⁶ and the Australian Higher Education Contribution Scheme (HECS) are repaid with income earned following graduation through their national tax offices.²⁷ In addition to TELS, the Fijian Government provides scholarships to high performers in designated disciplines at qualifying institutions but with an obligation to serve the nation for one and a half years for every year of the scholarship. These loan schemes may be emulated within the PIF-region under the *Pacific Regional Education Framework* (PacREF) for “mutually beneficial partnerships” (Pacific Islands Forum Secretariat (PIFS), 2018: p. 7).

This could operate as follows (Figure 1). An institution with international accreditation (such as APTC) may be allowed to train students in fields deemed to be in demand through a government-sponsored loan scheme. The accreditation may require private sector involvement, who may also provide input for accreditation. Any donor funds provided for the loans could be recycled over time thus helping with the financial viability of the loan scheme. Repayment for these schemes could be channelled through the national tax office where the debtor is employed. This necessitates cooperation between tax authorities across jurisdictions, an initiative

²⁶ Fiji introduced loans for students at USP in 1977, ahead of the introduction of HECS in 1989, where graduates repaid their loans through the tax system wherein repayments were set proportional to salary received; that is, repayments were contingent on income; see Fiji Tertiary Scholarships and Loans Board at: <https://www.tslb.com.fj/About-Us/Our-Policies>.

²⁷ See Chapman and Ryan (2005) on HECS.

that may be coordinated through the Pacific Islands Forum Secretariat (PIFS). The financial sustainability of the scheme may require premiums to be placed on the loans to recover costs of defaults and administration, and no more while competition across accredited institutions could lower costs of upskilling.

Creative arrangements could be employed within this loan scheme to combat “brain drain.” For example, if trainees elected to remain within the Pacific Islands for a set period of time (say, two years), their loan could be repaid by a Pacific Rim high-income country. The relative responsibility of Australia, New Zealand, the USA, and others to pay for those who remain home could be determined by ascertaining how many graduates they attracted over a set period of time—such repayment would be consistent with the Global Skill Partnership wherein rich nations pay for the upskilling of their migrants. In addition, if trainees move to, say, Australia for a set period of time and are unable to pay off their loan, they could be enticed home with debt forgiveness programs. Non-repayment of loans is likely to be limited by the fact that loans are extended only for highly employable skills.

The youth (and their parents) will have an incentive to take up the loans to fund investments into employable skills once they are certain of reaping a return on their investment. In contrast to grants (scholarships), loans put the onus both on the creditor and the debtor to minimize risks of misadventure. The public sector could reduce this risk by underwriting the quality of the training offered, coordinating collection of repayments, and generating information on human resource needs and mobility of workers across national borders. A more direct role for the public sector could be in facilitating international mobility of workers through designated visa classes for technical and professional workers. Such arrangements already are in place for Australia in the form of the “Distinguished Talent” visa (subclass 124)²⁸ which allows for permanent migration, and the “Pacific Trades Partnership” scholarships that allow the recipients to gain work experience in New Zealand.²⁹

These design details, along with many others, would need to be developed through a working group made up of government actors, training institutions, employers, and migrant rights associations. The scheme could then be trialled through a three-year pilot which would then be evaluated, with restrictions such as the temporary nature of the visa and the quota dropped if appropriate.

Conclusion

Many of the islands in the Pacific have large, unskilled, and under-employed, youth populations. Upskilling this population to fill skills gaps at home and abroad has the potential to lead to large economic and social development gains for these individuals, and their countries of origin and destination (Pacific Islands Forum

²⁸ See <https://immi.homeaffairs.gov.au/visas/getting-a-visa/visa-listing/distinguished-talent-124>

²⁹ See <https://www.ara.ac.nz/news-and-events/news/first-female-carpenter-from-pacific-trades-partnership-begins-education-in-new-zealand>

Secretariat (PIFS), 2007, 2018). This paper has analysed the costs of tuition, accommodation, and eventual remuneration for three professions— accountants, computer science graduates, and chefs—to show the potential economic gains that could be realized if people throughout the Pacific had more freedom to train and work wherever they chose.

Moving in this direction will require targeted investments to build the skills of prospective employees. For this, we can learn much from the many current and completed investments in this space. The Australian aid-funded KANI and the APTC were designed to upskill those in the Pacific Islands for work at home and abroad. While both have been able to facilitate the former, substantial skilled emigration remains elusive. Both also incur high costs and rely on an unsustainable funding model. Similar trends can be seen within local and regional universities. For example, the University of the South Pacific is owned by a dozen governments, so theoretically the qualifications earned from USP are recognized in each member country. USP has recently sought qualification accreditation from professional guilds in Australia and New Zealand, creating a form of “away” track, though emigration is yet to take place at a substantial rate. The national universities in Fiji, PNG, Samoa, and the Solomon Islands have focused solely on creating skills for their domestic markets but could be augmented to facilitate international mobility of skilled workers.

As a result, many of the existing investments in this space fall short of espousing all of the values of the Global Skill Partnership model, and the objectives of the GCM. One of the main reasons for this is the lack of a useful work visa to access Australia and New Zealand. Here, we outline a new way to regulate regional labour mobility—the Pacific Skills Visa—which could help graduates of the APTC and other training institutions access high-income nations of the Pacific Rim. This visa could be negotiated under the auspices of PACER Plus, a regional trade and integration agreement, thereby creating a full Pacific Skills Partnership. Student loan schemes could be expanded and augmented to cover costs and create a more sustainable funding model. The potential is large. What remains is to create the enabling structures to realize it.

References

- Batista, C., Lacuesta, A., and Vicente, P. C. (2012). Testing the ‘brain gain’ hypothesis: Micro evidence from Cape Verde. *Journal of Development Economics*, 97(1), 32-45. <https://doi.org/10.1016/j.jdeveco.2011.01.005>
- Bedford, R., Burson, B., and Bedford, C. (2014). *Compendium of legislation and institutional arrangements for labour migration in Pacific Island countries*. Bangkok: UNESCAP. <https://www.unescap.org/resources/compendium-legislation-and-institutional-arrangements-labour-migration-pacific-island>
- Belisle, M., Cassity, E., Kacilala, R., Seniloli, M. T., and Taoi, T. (2016). *Pacific Islands Literacy and Numeracy Assessment: Collaboration and innovation in reporting and dissemination*. Melbourne and Bangkok: Australian Council for Educational Research (ACER) and UNESCO. https://research.acer.edu.au/ar_misc/23/
- Blau, F. D., and Kahn, L. M. (1996). Wage structure and gender earnings differentials: an international comparison. *Economica*, S29-S62. <https://doi.org/10.2307/2554808>
- Brown, R. P., and Connell, J. (2004). The migration of doctors and nurses from South Pacific Island Nations. *Social Science and Medicine*, 58(11), 2193-2210. <http://dx.doi.org/10.1016/j.socscimed.2003.08.020>
- Cepla, Z., and Dempster, H. (2021). There's No Such Thing as a “Low”-Skill Worker. *Center for Global Development (CGD) Blog*, June 23, 2021. Washington DC: Center for Global Development (CGD). <https://www.cgdev.org/blog/theres-no-such-thing-low-skill-worker>
- CGD (Center for Global Development). (2021). Australia Pacific Training Coalition (APTC). Washington DC: Center for Global Development (CGD). <https://gsp.cgdev.org/2021/07/07/australia-pacific-training-coalition-aptc-2/>
- Chand, S., and Clemens, M. (2008). *Skilled emigration and skill creation: A quasi-experiment*. Center for Global Development (CGD) Working Paper 152. Washington DC: Center for Global Development (CGD). <https://www.cgdev.org/publication/human-capital-investment-under-exit-options-evidence-natural-quasi-experiment>
- Chand, S., and Markowski, S. (2018). ANZ-Pacific Migration Governance System. *International Migration*, 1-15. <https://doi.org/10.1111/imig.12524>
- Chapman, B., and Ryan, C. (2005). The access implications of income-contingent charges for higher education: lessons from Australia. *Economics of Education Review*, 24(5), 491-512. <https://doi.org/10.1016/j.econedurev.2004.08.009>
- Clemens, M. A. (2015). Global Skill Partnerships: A proposal for technical training in a mobile world. *IZA Journal of Labor Policy*, 4(2), 1-18. <https://doi.org/10.1186/s40173-014-0028-z>
- Clemens, M. A. (2021). The Missing Piece in Biden’s Plan for Central America: Bilateral Labor Agreements. *Center for Global Development (CGD) Blog*, February 9, 2021. Washington DC: Center for Global Development (CGD). <https://www.cgdev.org/blog/missing-piece-bidens-plan-central-america-bilateral-labor-agreements>
- Curtain, R. (2019a). *Australia Pacific Training Coalition and a new migration pathway for the Pacific as examples of a Global Skill Partnership: what has been achieved and what is missing?* Canberra: Australian National University (ANU). [unpublished]
- Curtain, R. (2019b). How large is Australian demand for low-skilled workers from the Pacific? *DevPolicy*, March 7, 2019. Canberra: Australian National University (ANU). <https://devpolicy.org/australian-demand-for-low-skilled-workers-from-the-pacific-20190307/>

- Curtain, R. and Howes, S. (2021). APTC graduates finding it increasingly difficult to find employment. *DevPolicy*, February 17, 2021. Canberra: Australian National University (ANU). <https://devpolicy.org/aptc-graduates-finding-it-increasingly-difficult-to-find-employment-20210217/>
- Docquier, F., and Rapoport, H. (2012). Globalization, Brain Drain, and Development. *Journal of Economic Literature*, 50(3), 681-730. <https://www.aeaweb.org/articles?id=10.1257/jel.50.3.681>
- Doyle, J. J. G., and Sharma, M. (2017). *Maximising the development impacts from temporary migration: Recommendations for Australia's Seasonal Worker Programme*. Washington DC: World Bank. <https://documents.worldbank.org/en/publication/documents-reports/documentdetail/572391522153097172>
- Easterly, W. and Nyarko, Y. (2008). *Is the Brain Drain Good for Africa?* Brookings Global Economy and Development Working Paper No. 19. <http://dx.doi.org/10.2139/ssrn.1121853>
- Gibson, J. and McKenzie, D. (2012). The Economic Consequences of 'Brain Drain' of the Best and Brightest: Microeconomic Evidence from Five Countries. *The Economic Journal*, 122(560), 339-375. <https://doi.org/10.1111/j.1468-0297.2012.02498.x>
- Gibson, J., and McKenzie, D. (2014). The development impact of a best practice seasonal worker policy. *Review of Economics and Statistics*, 96(2), 229-243. https://doi.org/10.1162/REST_a_00383
- Government of Australia. (2014). *Health Workforce Australia 2014: Australia's Future Health Workforce—Nurses Detailed*. Canberra: Department of Health, Government of Australia. <https://www.health.gov.au/sites/default/files/documents/2021/03/nurses-australia-s-future-health-workforce-reports-detailed-report.pdf>
- Government of Australia. (2017a). *Foreign Policy White Paper*. Canberra: Department of Foreign Affairs and Trade (DFAT), Government of Australia. <https://dfat.gov.au/publications/minisite/2017-foreign-policy-white-paper/fpwhitepaper/index.html>
- Government of Australia. (2017b). *Inquiry into the Seasonal Worker Programme*. Canberra: Department of Foreign Affairs and Trade (DFAT), Government of Australia. https://www.aph.gov.au/Parliamentary_Business/Committees/Joint/Migration/Seasonal_Worker_Programme/Report
- Government of Australia. (2017c). *Pacific Agreement on Closer Economic Relations Plus*. Canberra: Department of Foreign Affairs and Trade (DFAT), Government of Australia. <https://www.dfat.gov.au/trade/agreements/in-force/pacer/pacific-agreement-on-closer-economic-relations-plus>
- Government of Australia. (2017d). *Australia-Pacific Training Coaliton Stage 3 (APTC3): Investment Design Document*. Canberra: Department of Foreign Affairs and Trade (DFAT), Government of Australia. <https://www.dfat.gov.au/sites/default/files/aptc3-design-document.pdf>
- Government of Australia. (2019). *The Demand Driven University System: A mixed report card*. Canberra: Department of Foreign Affairs and Trade (DFAT), Government of Australia. <https://www.pc.gov.au/research/completed/university-report-card>
- Horne, R., Ngangan, K., Tavit-Melachon, S., and Brown, J. (2014). *Research into the Financing of Technical and Vocational Education and Training (TVET) in the Pacific*. Canberra: Department of Foreign Affairs and Trade (DFAT), Government of Australia. https://research.acer.edu.au/transitions_misc/22/
- International Labour Organization (ILO). (2017). *A Study on the Future of Work in the Pacific*. Suva, Fiji: International Labour Organization (ILO). https://www.ilo.org/suva/publications/WCMS_553880/lang--en/index.htm
- International Organization for Migration (IOM). (2018). *The Global Compact for Safe, Orderly, and Regular Migration*. <https://www.iom.int/global-compact-migration>

- Imbun, B. (1997). The emergence of an industrial workforce: Recruitment and training in the Papua New Guinea mining industry. *International Journal of Employment Studies*, 5(2), 35. <https://search.informit.org/doi/10.3316/INFORMIT.311076862368814>
- Johanson, R., Curtain, R., Moock, P., and Simmons, V. (2014). *Independent Review of the Australia-Pacific Technical College*. Canberra: Department of Foreign Affairs and Trade (DFAT), Government of Australia. <https://www.dfat.gov.au/about-us/publications/Pages/australia-pacific-technical-college-independent-review-2014>
- Lee, H. (2009). "Pacific Migration and Transnationalism: Historical Perspectives." In Lee, H., and Tupai Frances, S. (2009) *Migration and Transnationalism: Pacific Perspectives*. Canberra: Australian National University (ANU) Press. <https://www.jstor.org/stable/j.ctt24h8c7.6>
- Loomis, T. (1990). Cook Island remittances: volumes, determinants and uses. *Pacific Research Monograph*, 24, 61-81. <https://www.cabdirect.org/cabdirect/abstract/19911886185>
- Lutz, W., Sanderson, W., and Scherbov, S. (2008). The coming acceleration of global population ageing. *Nature*, 451(7179), 716. <https://doi.org/10.1038/nature06516>
- McKenzie, D., Garcia Martinez, P., and Winters, A. (2008). Who is coming from Vanuatu to New Zealand under the new Recognised Seasonal Employer (RSE) program? London: Centre for Research and Analysis of Migration (CREAM). <https://discovery.ucl.ac.uk/id/eprint/14240>
- McKenzie, D. (2006). *Remittances in the Pacific*. Paper for 2005-2006 Werner Sichel Lecture-Seminar Series "Immigrants and their International Money Flows". Lecture delivered February 15, 2006. <https://doi.org/10.17848/9781429492072.CH6>
- McMahon, W. W. (2018). The total return to higher education: Is there underinvestment for economic growth and development? *Quarterly Review of Economics and Finance*, 70, 90-111. <https://doi.org/10.1016/j.qref.2018.05.005>
- Miller, P. W. (1999). Immigration Policy and Immigrant Quality: The Australian Points System. *American Economic Review*, 89(2), 192-197. <https://www.jstor.org/stable/117105>
- Mortensen, R. (2000). Slaving in Australian courts: Blackbirding cases, 1869-1871. *Journal of South Pacific Law*, 4, 7-37. <http://www.paclii.org/journals/fjspl/vol04/7.shtml>
- O'Brien, L. K. (2013). *Migrating with Dignity: A Study of the Kiribati-Australia Nursing Initiative (KANI)* (Master of Arts). Kansas: University of Kansas. <https://core.ac.uk/download/pdf/213404023.pdf>
- Pacific Community. (2016). *2015 Pacific Islands Literacy and Numeracy Assessment (PILNA)*. Suva: Educational Quality Assessment Program (EQAP). <https://learningportal.iiep.unesco.org/en/library/2015-pacific-islands-literacy-and-numeracy-assessment-pilna-regional-report>
- Pacific Island Forum Secretariat (PIFS). (2005). *Thirty-Sixth Pacific Islands Forum, Papua New Guinea, 25-27 October 2005, Forum Communiqué*. Suva: Pacific Island Forum Secretariat (PIFS). https://www.forumsec.org/wp-content/uploads/2017/11/2005-Forum-Communique_Madang-25-27-Oct-05.pdf
- Pacific Island Forum Secretariat (PIFS). (2007). *The Pacific Plan for Strengthening Regional Cooperation and Integration*. Suva: Pacific Island Forum Secretariat (PIFS). <https://pacific-data.sprep.org/dataset/pacific-plan-strengthening-regional-cooperation-and-integration>
- Pacific Island Forum Secretariat (PIFS). (2018). *Pacific Regional Education Framework (PacREF) 2018-2030: Moving Towards Education 2030*. Suva: Pacific Island Forum Secretariat (PIFS). <https://www.globalpartnership.org/content/pacific-regional-education-framework-pacref-2018-2030-moving-towards-education-2030>

- Ramasamy, S., Krishnan, V., Bedford, R., and Bedford, C. (2008). The Recognised Seasonal Employer policy: seeking the elusive triple wins for development through international migration. *Pacific Economic Bulletin*, 23(3), 171-186. <https://openresearch-repository.anu.edu.au/handle/1885/157917>
- Rynes, S. L., and Milkovich, G. T. (1986). Wage surveys: Dispelling some myths about the “Market Wage”. *Personnel Psychology*, 39(1), 71-90. <https://doi.org/10.1111/j.1744-6570.1986.tb00575.x>
- Shaw, L., Edwards, M., and Rimon, A. (2014). *Kiribati Australia Nursing Initiative (KANI) Independent Review*. Canberra: Department of Foreign Affairs and Trade (DFAT), Government of Australia. <https://www.dfat.gov.au/about-us/publications/Pages/kiribati-australia-nursing-initiative-independent-review>
- Voigt-Graf, C. (2003). Fijian teachers on the move: causes, implications and policies. *Asia Pacific Viewpoint*, 44(2), 163-175. <https://doi.org/10.1111/1467-8373.00191>

Annex 1. Demographic and economic data for countries and territories in the Pacific Rim, 2017

Country	Population total '000s	GDP/capita PPP\$, 2011	Life expectancy at birth, years)	Population growth (annual %)	Population ages 0–14 (%)	Population age 65+ (%)	Difference (pop. 0–14 vs. pop. 65+)
Australia	24,602	44,643	82	1.68	19	16	3
Canada	36,708	44,018	82	1.22	16	17	-1
China	1,386,395	15,309	76	0.56	18	11	7
Fiji	906	8,703	70	0.75	28	6	22
France ^a	67,106	38,808	83	0.37	18	20	-2
French Polynesia ^a	283	..	77	0.99	23	8	15
Guam ^b	164	.	80	0.81	25	10	15
Japan	126,786	39,011	84	-0.16	13	27	-14
Kiribati	116	1,986	67	1.74	35	4	31
Korea, Rep.	51,466	35,938	83	0.43	13	14	-1
Marshall Islands	53	3,860	..	0.11	..	..	..
Micronesia, Fed. Sts.	106	3,364	69	0.58	33	5	28
Nauru	13	13,670	..	-1.33	..	..	..
New Caledonia ^a	280	..	77	1.40	23	10	13
New Zealand	4,794	36,013	82	2.12	20	15	5
Palau	22	13,501	..	1.05	..	..	..
Papua New Guinea	8,251	3,825	66	2.03	36	4	32
Samoa	196	6,036	75	0.67	37	6	31
Solomon Islands	611	2,206	71	1.97	39	4	35
Tonga	108	5,426	73	0.83	36	6	30
Tuvalu	11	3,575	..	0.85	..	..	..
United States of America (USA)	325,147	54,471	79	0.64	19	15	4
Vanuatu	276	2,922	72	2.14	36	4	32

Notes: Data is for the year 2017 and is sourced from the World Bank Development Indicators (online) database accessed on 13 June 2019; Countries in the first column are listed in alphabetical order; ^a France included because New Caledonia and French Polynesia are its territories. The right-most column reports the difference in the population of the percent population aged between 0 and 14 years to those above 65 years of age. 'PPP' means Purchasing Power Parity.