

2 Highlights



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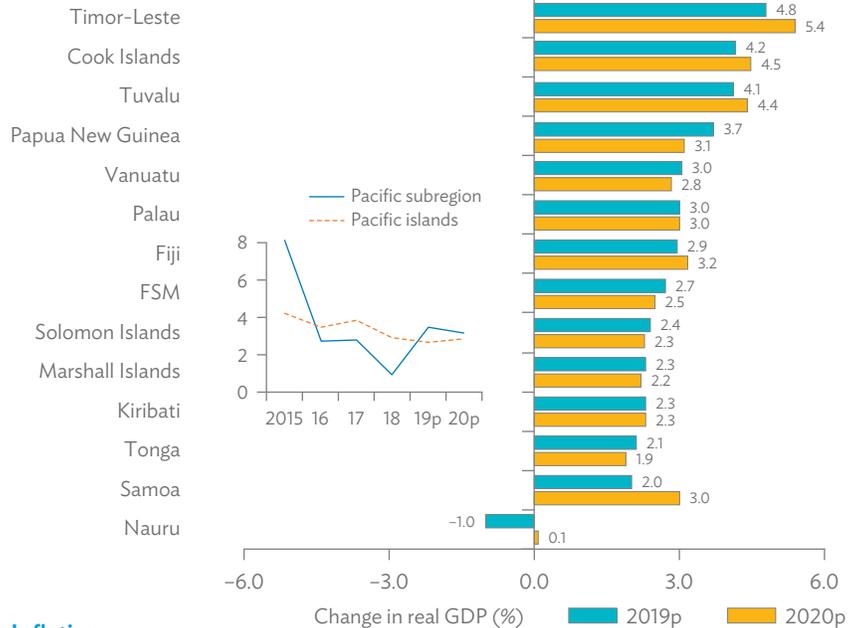
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Abbreviations

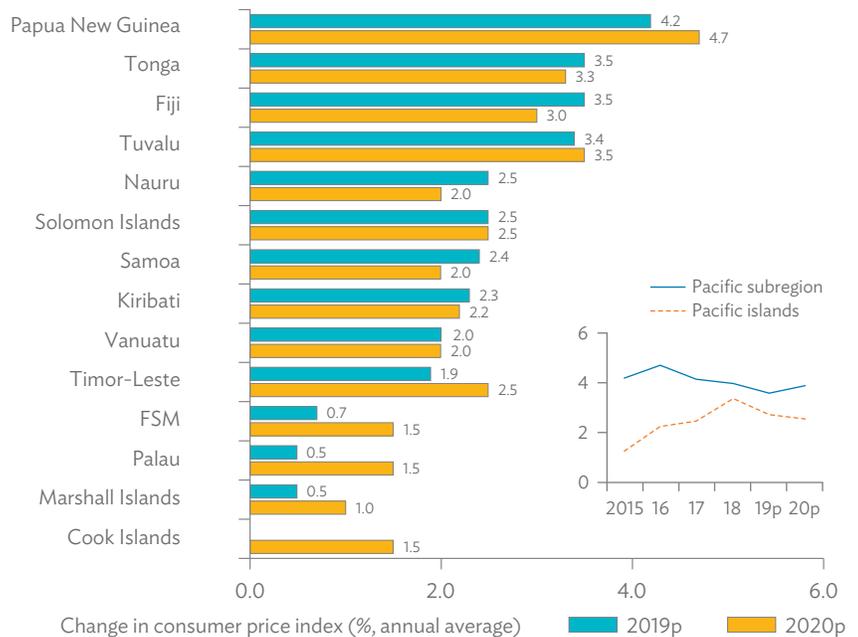
ADB	Asian Development Bank
F\$	Fiji dollar
FSM	Federated States of Micronesia
FY	fiscal year
GDP	gross domestic product
ICT	information and communication technology
lhs	left-hand scale
m.a.	moving average
PNG	Papua New Guinea
rhs	right-hand scale
RMI	Republic of the Marshall Islands
US	United States
y-o-y	year-on-year

Asian Development Bank Projections

GDP Growth



Inflation



FSM = Federated States of Micronesia, GDP = gross domestic product, p = projection, RMI = Republic of the Marshall Islands.

Notes: Projections are as of July 2019 and refer to fiscal years. Regional averages of GDP growth and inflation are computed using weights derived from levels of gross national income in current United States dollars following the World Bank Atlas method. Averages for Pacific islands exclude Papua New Guinea and Timor-Leste. Timor-Leste's GDP is exclusive of the offshore petroleum industry.
Source: ADB estimates.

Notes

This *Monitor* uses year-on-year (y-o-y) percentage changes to reduce the impact of seasonality, and 3-month moving averages (m.a.) to reduce the impact of volatility in monthly data.

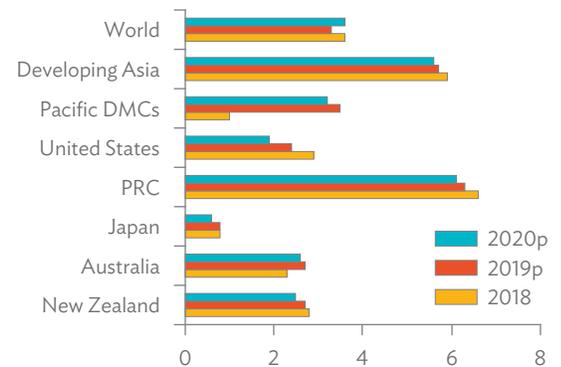
Fiscal years end on 30 June for the Cook Islands, Nauru, Samoa, and Tonga; 31 July for Fiji; 30 September for the Republic of the Marshall Islands, the Federated States of Micronesia, and Palau; and 31 December elsewhere.

INTERNATIONAL AND REGIONAL DEVELOPMENTS

Heightened trade conflict continues to dim global outlook

- Global growth decelerated from 3.8% in 2017 to 3.6% in 2018, largely because of worsening trade conflict between the world's two largest economies and lower consumer and business confidence in the euro area. In line with this, growth in developing Asia moderated to 5.9% last year. Downside risks, including the escalation of the trade conflict and policy uncertainties, are expected to further weaken the global economic expansion to 3.3% in 2019.
- The Pacific subregion posted low economic growth of 1.0% last year, although recovery in economic activity is expected to push short-term prospects. Reconstruction and rehabilitation efforts in Papua New Guinea, following last year's major earthquake, and economic recovery in Timor-Leste as well as the continued growth in other countries are expected to push subregional growth to 3.5% in 2019 before slightly moderating to 3.2% in 2020.
- The United States (US) economy posted higher-than-expected economic growth in the first quarter of 2019, driven by higher net trade and private inventories. The economy grew at an annualized rate of 3.1% between January and March 2019 with exports rising by 4.8% and imports declining by 2.5%. Positive contributions from state and local government spending, as well as nonresidential fixed investment, also supported the latest expansion. Despite the broadly positive developments, home sales to domestic buyers slowed to 1.5%, its slowest pace since 2015. Moderating global growth, brought about by rising trade tensions, could also temper the growth momentum in the US. With risks mostly on the downside, economic growth is expected to decelerate to 1.9% in 2019 and 1.6% in 2020.
- The People's Republic of China saw its economy grow by 6.4% in the first quarter of 2019, supported by strong manufacturing production and higher consumer spending. Industrial production went up by 8.5% this quarter, recording its fastest growth since 2014. Meanwhile, retail sales for March 2019 grew by 8.7% year-on-year (y-o-y). The better-than-expected performance has been generally credited to the policy measures undertaken by the government to stimulate the economy. However, gross domestic product (GDP) growth is expected to continue its downward trend as trade tensions with the US have an impact on economic activity, and as restrictions on shadow banking remain in place. The People's Republic of China's economy is forecast to slow further to 6.3% in 2019 and 6.1% in 2020.
- Japan's economy unexpectedly grew at an annualized rate of 2.1% in the first quarter of 2019, instead of the economic contraction projected by market analysts. The main driver of the latest expansion was the faster decline of its imports than its exports. However, private consumption fell by 0.1% and capital expenditure by 0.3%, domestic demand could be dented further by a sales tax hike planned to take effect in October of this year. Concerns on domestic economic activity coupled with the impact of trade tensions on global trade, temper the growth forecast for 2019 to 0.8% and a lower growth of 0.6% in 2020.
- The Australian economy grew at an annualized rate of 0.4% in the first three months of 2019, slightly higher than the previous quarter but below market expectations. Strong government spending on health, aged care, and disability insurance, as well as higher exports supported the expansion. On the other hand, weak household spending, which was reflected in a contraction in housing construction, has adversely affected the growth performance of the economy. From only a 2.3% full-year growth in 2018, robust commodity exports and expectations of stronger business investments outside of the mining industry support FocusEconomics' forecast GDP growth of 2.7% in 2019 and 2.6% in 2020.

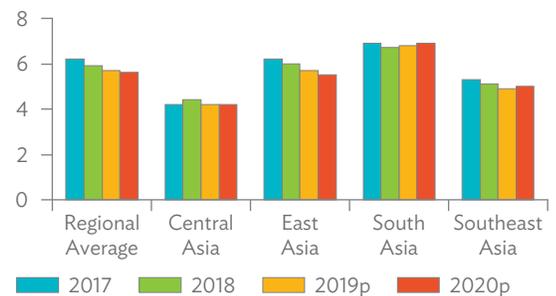
GDP Growth (% annual)



DMC = developing member country, GDP = gross domestic product, p = projection, PRC = People's Republic of China. Notes: Developing Asia and Pacific DMCs as defined by ADB. Figures are based on ADB estimates except for World GDP growth.

Sources: ADB. 2019. *Asian Development Outlook 2019: Strengthening Disaster Resilience*. Manila; IMF. 2019. *World Economic Outlook April 2019: Growth Slowdown, Precarious Recovery*. Washington, DC.

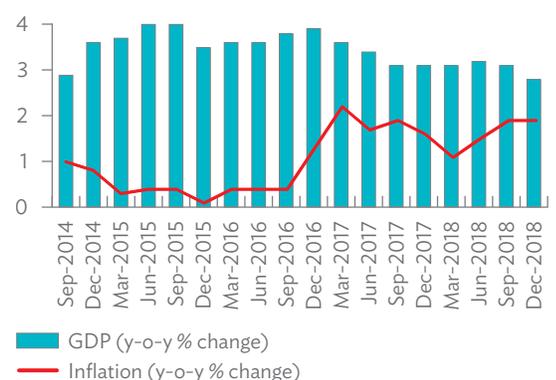
GDP Growth in Developing Asia (% annual)



GDP = gross domestic product, p = projection.

Source: ADB. 2019. *Asian Development Outlook 2019: Strengthening Disaster Resilience*. Manila.

New Zealand Economic Indicators (quarterly)



GDP = gross domestic product.

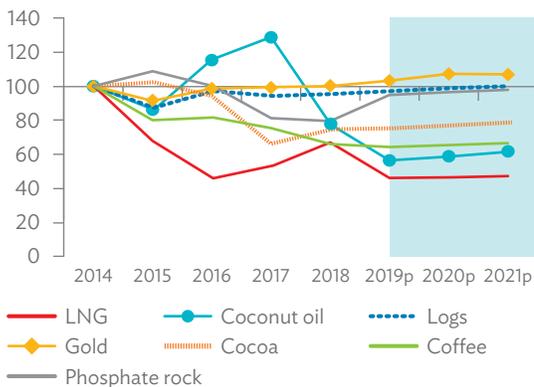
Sources: Statistics New Zealand and Reserve Bank of New Zealand.

Average Spot Price of Brent Crude Oil
(monthly, \$/barrel)



Source: World Bank Commodity Price Data (Pink Sheet).

Prices of Export Commodities
(2014 = 100, annual)



LNG = liquefied natural gas, p = projection.
Source: ADB calculations using data from World Bank Commodity Price Data (Pink Sheets).

Tourist Departures to Pacific Destinations
(‘000, January–April totals)



Sources: Australian Bureau of Statistics and Statistics New Zealand.

- New Zealand’s GDP expanded at an annualized rate of 0.6% in the last quarter of 2018, while the full-year growth for 2018 is at 2.8%. Growth was driven by stronger activity among service industries as well as increased construction of nonresidential buildings. This offset declines in agriculture, forestry, and fisheries, and weak manufacturing activity. On the demand side, household spending grew by 1.3%, while investment in fixed assets rose by 1.4% during the quarter. FocusEconomics’ full-year growth forecast for 2019 is at 2.7%, and is expected to slow down to 2.5% in 2020 as external demand for dairy products, the country’s major export, is projected to weaken in the near term.

Commodity price outlook largely influenced by movements in global supply

- After a sharp drop in the fourth quarter of 2018 because of increased global production, the average price of Brent crude oil has risen steadily since the start of the year. Recent production cuts have reversed the trend. Average crude oil prices are expected to fall in the next few years due to expected tamer global demand and higher global supply. Average prices of natural gas increased by 9.7% in the first quarter of 2019 compared with the same quarter of the previous year. However, it has generally followed a downward trend since the start of 2019 because of weaker demand due to mild weather and more-than-adequate global supply. Prices are expected to pick up this year as demand increases, but remain below the 2018 levels.
- Meanwhile, some agricultural commodities such as grains saw their prices increase in the first quarter of 2019 due to lower global supply. Cocoa prices went up by 2.3% in the first quarter of 2019 (y-o-y) although the full-year forecast does not indicate any major changes to the current level as global supply is expected to remain stable. On the other hand, record global production has pulled down the price of coffee in the first quarter of 2019 by 7.0%. Full-year forecast for 2019 is expected to reflect the current price trend, followed by a slight recovery in 2020. Finally, strong demand and fall in interest rates have supported higher gold prices; this is expected to continue up to 2020. While prices of food commodities are generally expected to rise in the next few years, it would greatly depend on energy and fertilizer price movements as well as the resolution of ongoing trade conflicts.

Mixed trends in tourism to the Pacific

- Tourism from Australia to major South Pacific destinations posted solid growth of 5.1% (y-o-y) over the first 4 months of 2019. Expanded flight services through Brisbane helped fuel strong growth in the number of trips to Vanuatu (links to Espiritu Santo and Port Vila) and to Samoa (new twice weekly flights to Apia). A reversal of last year’s weak start in Australian tourism to Fiji, as well as sustained double-digit growth in trips to the Cook Islands, also supported the strong performance in early 2019. By contrast, the number of Australian tourists visiting Tonga fell sharply over the same period, after steady growth last year.
- However, tourism from New Zealand to the South Pacific appears to be reaching a plateau following strong growth in recent years. The number of tourists from New Zealand visiting the Pacific declined marginally in the period from January to April 2019 (–0.1% y-o-y). A sharp fall from last year’s high base was recorded in tourism from New Zealand to the Cook Islands and, to a lesser extent, to Tonga and Vanuatu. These declines were mostly offset by steady, albeit easing from double-digit rates last year, growth in the number of New Zealand tourists visiting Fiji and Samoa. Recent moves to initiate the resumption of weekly Air New Zealand flights from Auckland to Port Vila—suspended since January 2016 due to runway safety concerns at Bauerfield International Airport—bodes well for Vanuatu’s tourism prospects.

COUNTRY ECONOMIC ISSUES

Fiji tertiary education: Striking a balance to build a skilled workforce

Lead author: Lily Anne Homasi

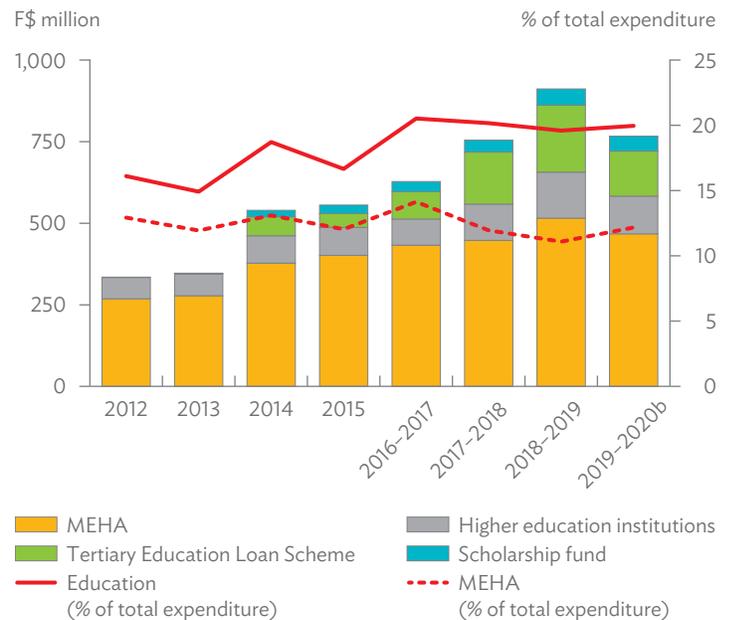
Fiji, as the hub of the Pacific—geographically, culturally, and historically—offers opportunities for social development and inclusive growth for itself and the rest of the subregion. As one of the most developed economies in the Pacific, with an average income of \$6,140 per capita in 2018, the country enjoys a relatively good standard of living. From 2010 to 2017, the economy grew by an average of 3.6%. A key contributor to economic growth is productivity resulting from the effective utilization of investment in human capital. Tertiary education is at the forefront of the government’s agenda to further boost human capital.

The Government of Fiji underscores education as the most effective pathway to ensuring a growing economy that is driven by a productive society. The government, following its 20-year vision, *Transforming Fiji: 2017–2036 National Development Plan*, has consistently prioritized education spending with allocation at around 20% of total expenditure since fiscal year (FY) 2017 (Figure 1). In FY2019, the Ministry of Education, Heritage and Arts (MEHA) was allocated F\$515.9 million, equivalent to 11.1% of total expenditure, 7.3% of gross domestic product (GDP). This included a free education grant of F\$35 million for primary level and F\$31.6 million for secondary level. Operating grants were also provided for higher education institutions (HEIs): the Fiji National University (F\$65.1 million), the University of Fiji (F\$4.2 million), and The University of the South Pacific (F\$33.0 million). A capital grant of F\$19 million was also allocated for the Fiji National University. This is aside from the F\$205.6 million for Tertiary Education Loan Scheme (TELS) and F\$51.1 million for Scholarship Fund. For FY2020, the budget for MEHA was reduced but remains relatively high, equivalent to 12.2% of total expenditure.

Despite the government’s higher investments in tertiary education, some HEIs have noted that there is still need for financing, given the growing demand for tertiary education services from within Fiji, but as well as the neighboring Pacific economies. A forthcoming World Bank Public Expenditure Review demonstrates this trend of increased government commitments for tertiary education through the TELS and core funding to HEIs (Figure 2).

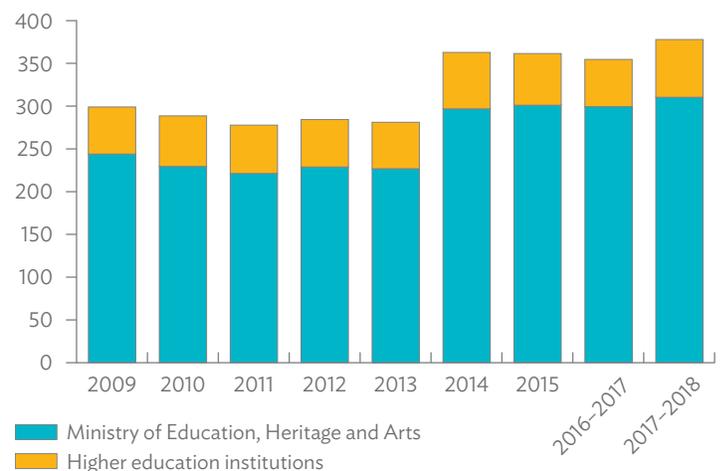
While this may seem an encouraging trend, it also highlights some limitations to the flow of resources for other levels of education, including early childhood, primary, and secondary. In FY2019, the government allocated 48% of its education budget to tertiary education covering 15% (41,946 students) of the total schooling population versus an allocation of 52% that accounts for the remaining 85% (273,300 secondary, primary, and early childhood education students) (Figure 3). However, tertiary education by convention is usually more expensive. For instance, the government could use the same amount of funds to support 2–4 students to complete early childhood and primary education versus supporting one student to complete tertiary education.

Figure 1: Fiji Public Education Expenditure, by Group and Fiscal Year



b = budget, MEHA = Ministry of Education, Heritage and Arts. Source: Republic of Fiji Budget Estimates, various years.

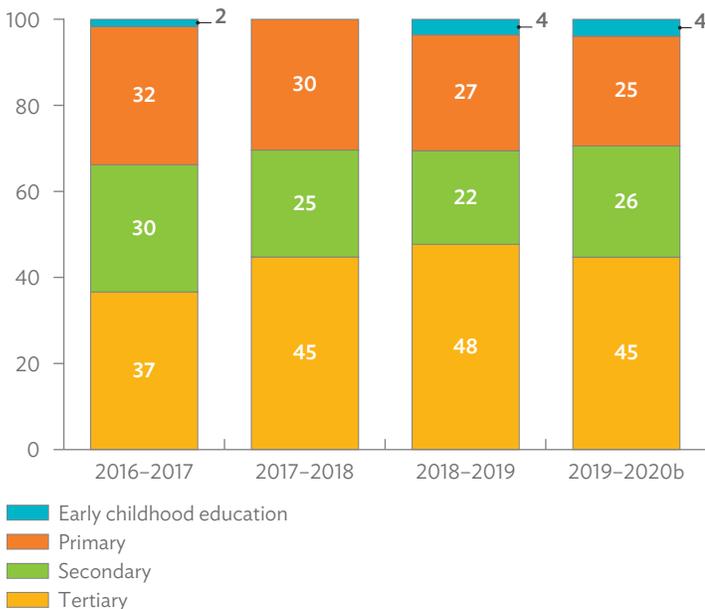
Figure 2: Fiji Real Spending on Education (F\$ million, constant 2009 prices)



Note: Education spending excludes miscellaneous budget. Source: World Bank. 2019. *Fiji Public Expenditure Review*. Washington, DC.

Anecdotal evidence suggests that investing in early education, particularly in early childhood and primary, have lifelong positive effects. Gaps in children’s development often already exist prior to entering primary school, and widen over time, resulting in lifelong adverse effects. Further consideration and discussion among key stakeholders appear to be necessary on how the current approach to education could be reevaluated to develop a more holistic and comprehensive strategy toward building a skilled workforce that will increase productivity in the economy.

Figure 3: Fiji Public Education Expenditure, by Level and Fiscal Year (%)



b = budget.

Note: Education expenditures exclude shared allocation and one-off expenditures.

Source: Republic of Fiji Budget Estimates, various years.

Further, the quality of education must continuously be strengthened. The Fiji Higher Education Commission,¹ in charge of supervising and regulating tertiary institutions, has declared that all tertiary institutions must abide by the Fiji qualifications framework in order to meet student–customer’s needs. To achieve the Fiji Higher Education Commission’s vision to build an educated and globally competitive Fiji, it is critical that MEHA and tertiary institutions—including the Fiji National University, the University of the South Pacific, the University of Fiji, and other smaller universities—work closely with the commission to ensure quality alignment of education support to build a skilled workforce.

Endnote

¹ Established as a statutory body in 2010 under the Fiji Higher Education Act 2018.

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Government of Fiji National Development Plan. <https://www.fiji.gov.fj/getattachment/15b0ba03-825e-47f7-bf69-094ad33004dd/5-Year---20-Year-NATIONAL-DEVELOPMENT-PLAN.aspx>.

World Bank. 2019. *Fiji Public Expenditure Review*. Washington, DC.

Government of Fiji Budget Estimates

<http://www.economy.gov.fj/budget.html>

<http://www.economy.gov.fj/budget/2018.html>

<http://www.economy.gov.fj/budget/2019.html>

Ministry of Education Heritage and Arts

<http://www.education.gov.fj/>

<http://www.education.gov.fj/wp-content/uploads/2018/09/NTS-and-TELS.pdf>

Fiji Higher Economic Commission

<https://www.fhec.org.fj/>

Other Key Sources

<http://www.iisg.nl/indonesianeconomy/humancapital/pdf/7-chapter2.pdf>

<https://www.fiji.gov.fj/getattachment/15b0ba03-825e-47f7-bf69-094ad33004dd/5-Year---20-Year-NATIONAL-DEVELOPMENT-PLAN.aspx>

<https://www.adb.org/sites/default/files/publication/29407/higher-education-across-asia.pdf>

Building strong foundations: Improving the quality of basic education in the Federated States of Micronesia and the Marshall Islands

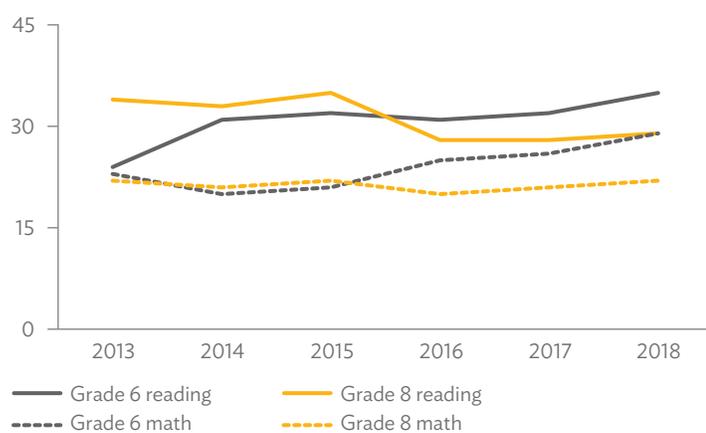
Lead authors: Cara Tinio and Rommel Rabanal

The predominantly young populations in both the Federated States of Micronesia (FSM) and the Republic of the Marshall Islands (RMI) are a valuable resource that must be tapped to maximize future growth in these economies. A well-educated workforce realizes higher earnings over time, and contributes to improved health outcomes, social equity, and cohesion, all of which ultimately contribute to reducing hardship and vulnerability.

Student performance at the primary level is important for shaping performance at higher levels of education, where correcting weak learning outcomes becomes more expensive amid broader social issues that can lead to disenfranchised youth.

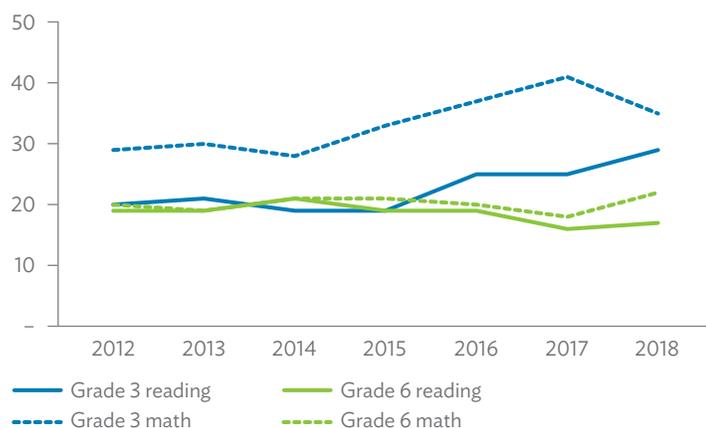
Both the FSM and the RMI recognize the dire need to improve the quality of basic education, as reflected in its inclusion among national priorities in their respective national strategic development plans. Less than half of primary-level students in each country meet or exceed minimum competency standards for literacy and numeracy under their respective national standardized aptitude tests (Figures 4 and 5).

Figure 4: Less Than Half of Test-Takers in the Federated States of Micronesia Meet or Exceed National Benchmarks in Reading and Mathematics
(% of students meeting or exceeding national benchmarks)



Sources: Federated States of Micronesia, National Department of Education. Various years. *National Minimum Competency Test Report*. Pohnpei.

Figure 5: Less Than Half of Test-Takers in the Marshall Islands are Rated Proficient or Higher in Reading and Mathematics
(% of students rated proficient or higher)



Note: This chart shows test scores for English reading.

Sources: Republic of the Marshall Islands, Ministry of Education, Sports and Training. Various years. *Digest of Education Statistics*. Majuro.

Such outcomes arise partly from poor teacher quality. In 2015–2017, an average of 17.0% of teachers in the FSM did not hold at least a 2-year associate degree, the nominal minimum qualification for teaching; an average of 33.2% of teachers in the Marshall Islands also did not have this qualification. Further, only the second year of the associate degree program focuses on teacher education courses, and learning opportunities at the professional level have lacked cohesion.

The FSM and the RMI must also contend with regular cuts in funding from the Compact of Free Association funds from the Government of the United States (US), which are scheduled to cease in 2023. Grants under the countries' Compact funds cover recurrent public expenditures in education as well as health and infrastructure, but those allocated to education are insufficient to address significant needs for teacher training or teaching and learning resources.

Supplemental education grants from the US make up 100% of state education budgets in the FSM and about 69% of the national education budget in the RMI, but are not included in projections for sustainable disbursement from respective trust funds of the FSM and the RMI after 2023, meaning that these governments would have to find additional resources for these grants when they expire.

An Asian Development Bank (ADB) project currently under way seeks to improve the quality of basic education in the FSM and the RMI through the following ways:

- Strengthen teacher preparation in the in-service and pre-service areas. Training 800 teachers in the FSM and 400 teachers in the RMI in the Quality Pedagogy Framework, an approach to advancing student learning that uses evidence-based factors such as social interaction, relevant and meaningful activities, and assessment for learning. This framework will be embedded in teacher education at both the college and professional levels, and in practice in the classroom.
- Strengthen the FSM and the RMI capacities to use student assessment to improve learning through current methodologies on student assessment, classroom assessment, and ensuring improvements to new national student assessment frameworks.
- Expand access to better and more teaching and learning resources and materials for the classroom that meet bilingual teaching needs in both countries. Resources will be digitized also to ensure that all learners can avail of contextually appropriate, culturally responsive resources such as open-source resources, readers in the vernacular language, and low-cost mobile and interactive learning tools.
- Strengthen school leadership and management by extending professional learning opportunities for school principals, fostering partnerships with parents and communities to improve students' school readiness, and expanding school-based sustainable development projects.

The project is still in the early stages of implementation, but anecdotal evidence is promising. For instance, teacher education programs at the University of the South Pacific's RMI campus and College of the Marshall Islands have already formally incorporated the Quality Pedagogy Framework developed under ADB assistance. Inroads have been made to align pre-service and in-service teacher training, thereby creating a coherent system of expected proficiencies for all primary school teachers in both countries.

In the FSM, the College of Micronesia-FSM is also incorporating the principles of the Quality Pedagogy Framework into its teacher education program. Complementary developments in the education sector will also help in supporting the achievement of project objectives. The FSM Teacher Certification Policy was updated and strengthened in 2016, and efforts are ongoing to introduce performance-based contracting for education (alongside health services) personnel. However, current arrangements still fall short of a well-functioning performance-based contracting system, which requires a clear set of objectives and performance indicators, systems for collecting and validating data on these indicators, and appropriate financial and nonfinancial incentives to motivate the achievement of agreed-upon goals and targets. These elements will need to be introduced to promote improvements in teacher quality and learning outcomes more effectively.

The project will provide more students the support they need to reach their full potential and, over time, build a stronger human capital base in these countries. The project has deliberately focused on strengthening the key existing education institutions necessary to improve the quality of the basic education system in each country. Further, by coordinating, collaborating, and working together, the RMI and the FSM will be better able to deliver quality services efficiently and ensure resiliency after 2023 when US support becomes uncertain.

Reference

ADB. 2017. *Report and Recommendation of the President to the Board of Directors: Proposed Grants and Administration of Grant to the Republic of the Marshall Islands and the Federated States of Micronesia for Improving the Quality of Basic Education in the North Pacific Project*. Manila.

Improving education access in Solomon Islands and Vanuatu

Lead authors: Prince Cruz and Jacqueline Connell

The geography of Solomon Islands and Vanuatu makes universal access to education difficult to achieve. Remoteness and isolation are pushing up the cost of building schools and maintaining education services. Meanwhile, long distances combined with high transportation and opportunity costs can dissuade parents and students from using education services. The governments

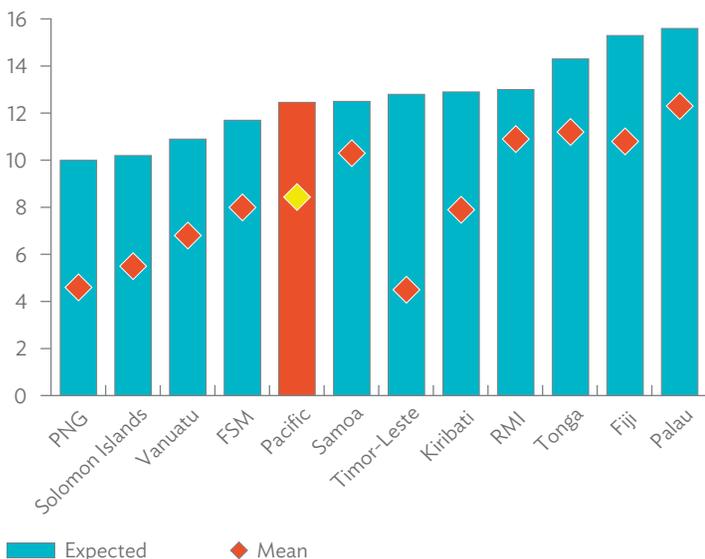
and development partners have provided school grant schemes to minimize the costs borne by parents for education. While these initiatives have been broadly successful in getting more kids in school, challenges remain in ensuring that these benefits are evenly spread across provinces and that education quality also improves.

Solomon Islands and Vanuatu (along with Papua New Guinea [PNG]) registered the lowest scores for the education index among Pacific developing member countries (DMCs) in the 2018 Human Development Report (United Nations Development Programme 2018). The mean number of years of schooling, which is based on the actual schooling received by the population with ages 25 years and above, was below 7 years for the three countries, indicating that most adults only received or completed primary education. The expected number of years of schooling, which is a projection based on the current age-specific enrollment rates, was 10 years in Solomon Islands and 11 years in Vanuatu, shorter than the average of 12.5 for the Pacific (Figure 6).

The primary gross enrollment rates (GERs), which consider all students enrolled not only those at the appropriate age levels, exceeded 100% in several Pacific DMCs, indicating the problem of overage students and repeaters (Figure 7). In contrast, the primary and secondary school net enrollment rates (NERs), which only capture the children enrolled at the appropriate age level, were relatively low in Solomon Islands and Vanuatu compared to other Pacific DMCs (United Nations Educational, Scientific and Cultural Organization [UNESCO] 2015).

Among the countries with available data, primary school dropout rates were highest in Solomon Islands (36.6%) and Vanuatu (28.5) (Figure 8).

Figure 6: Expected and Mean Number of Years of Schooling



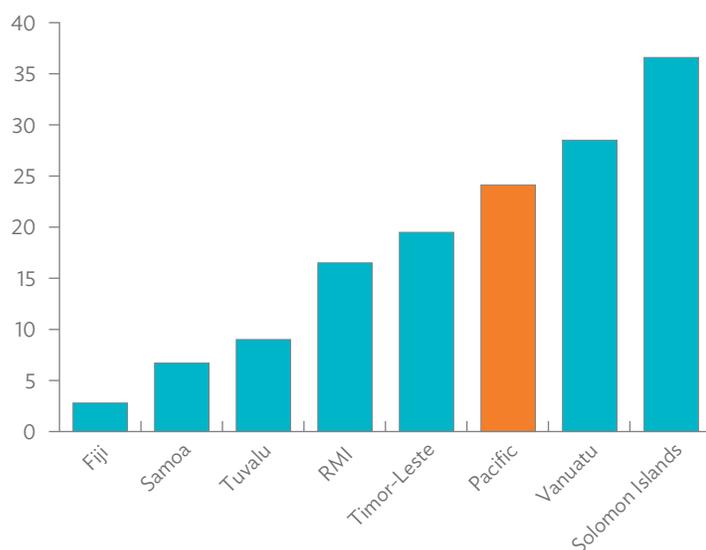
FSM = Federated States of Micronesia, PNG = Papua New Guinea, RMI = Republic of the Marshall Islands.
 Note: Pacific average is not weighted by population.
 Source: United Nations Development Programme. 2018. *Human Development Report 2018 Statistical Update*. New York.

Figure 7: Gross Enrollment Rate (% of level-age population)



FSM = Federated States of Micronesia, PNG = Papua New Guinea, RMI = Republic of the Marshall Islands.
 Note: Pacific average is not weighted by population.
 Source: United Nations Development Programme. 2018. *Human Development Report 2018 Statistical Update*. New York.

Figure 8: Primary School Dropout Rate
(% of primary school cohort)



RMI = Republic of the Marshall Islands.

Note: Pacific average is not weighted by population.

Source: United Nations Development Programme. 2018. *Human Development Report 2018 Statistical Update*. New York.

There are various factors underlying these results and affecting access to education. Anecdotal evidence captured in a Government of Vanuatu report suggests that children may not go or delay attending school because of “disability, distance to school, their parents don’t value education, girls help with household chores, or older boys help in the gardens” (MOET 2018a).

The distances that children must travel between home and school can also affect the age that they start primary school. A 2011 assessment for the Pacific Education for All 2015 Review reported that some children had to walk or paddle up to 2 hours to and from primary school in Solomon Islands. This can result in children not starting primary school until they are 8 years old or 9 years old and able to walk the distance. Added to the geographic and spatial challenges, Vanuatu and Solomon Islands are among the most linguistically diverse countries in the world. This adds to the complexity in terms of addressing literacy in the basic education system (UNESCO 2015).

CLOSING THE EDUCATION GENDER GAP IN SOLOMON ISLANDS

Solomon Islands has long aspired for universal access to primary school education. Outcome 1 of the government’s 2007–2015 Education Strategic Framework aims that “all children in the Solomon Islands regardless of gender, ethnicity, religion, location or disability have access to Basic Education” (Ministry of Education and Human Resources Development [MEHRD] 2007).

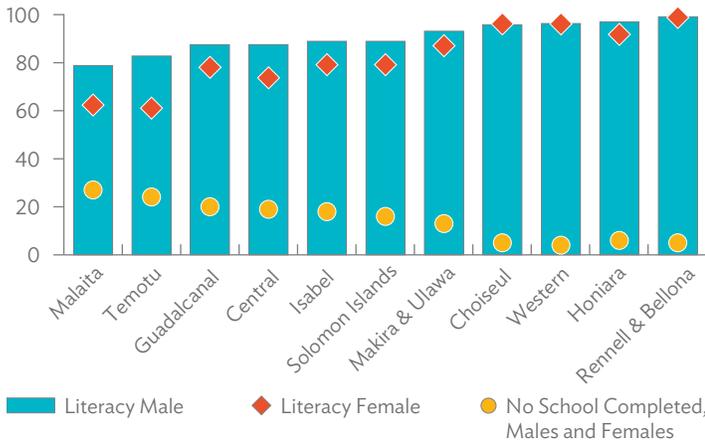
With a population of more than half a million in 2009, the census revealed that education outcomes differ among provinces. The lowest literacy and enrollment rates were seen in Malaita, the biggest province in terms of population (at 26.7% of total population) and the third-highest density. Temotu, the outermost province, which is composed of several small islands southwest of Honiara, had the second-lowest literacy rate. Guadalcanal (which surrounds Honiara), Isabel, and Central provinces also had literacy rates below the national average, which was at 84.1% of people aged 15 and above in 2009.

Table 1: Solomon Islands Provincial Profiles, 2009

Province	Population	Population Density (per square kilometer)	Literacy Rate (% of population 15 years old and above)	Primary School Enrollment Rate (% of children 6–12 years old)
Central	26,051	42	80.6	86.5
Choiseul	26,372	7	95.9	92.0
Guadalcanal	93,613	18	82.9	80.5
Honiara	64,609	2,953	94.5	86.4
Isabel	26,158	6	84.0	88.5
Makira and Ulawa	40,419	13	90.1	87.2
Malaita	137,596	33	70.4	75.3
Rennell and Bellona	3,041	5	99.1	97.3
Temotu	21,362	25	71.3	87.8
Western	76,649	10	96.3	90.6
Solomon Islands	515,870	17	84.1	83.3

Source: Solomon Islands National Statistics Office. 2009 *Housing and Population Census Report*. Honiara.

Figure 9: Solomon Islands Literacy Rate and School Completion, by Province, 2009

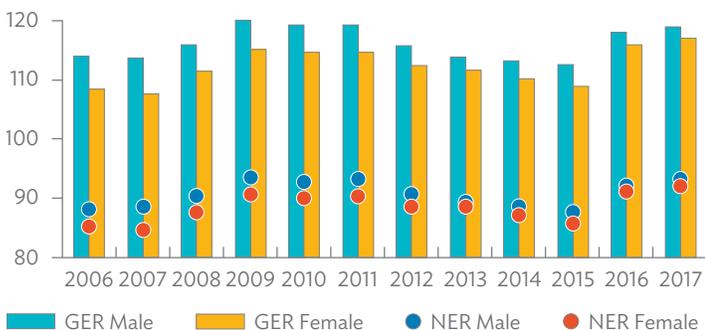


Note: Literacy and school completion based on population aged 15 and above. Source: Solomon Islands National Statistics Office 2009 Housing and Population Census Report.

The disparity in education outcomes between males and females was most significant in the provinces with the lowest literacy rates (Figure 9). In Malaita and Temotu, the literacy rate of males was around 80%, while it was only around 60% for females. These two provinces had the highest percentage of the population aged 15 and above with “no school completed.”

Around the time the 2009 census was conducted, the government introduced three measures to improve education. First, the School Grants Policy, introduced in 2008, provides direct funding to all primary school authorities (provincial, church, and private) based on a formula that is linked to the cost of school operation and maintenance. Second, the Basic Education Policy, introduced in 2009, aims for a “fee free basic education”, which states that “no children can be pushed out from school, because of not paying fees or contributions.” However, MEHRD (2016) reports that they continue to receive complaints regarding some schools setting fees and requesting parents to pay. Third, the use of vernacular languages in education was introduced in 2010, enabling students to learn in their first language.

Figure 10: Solomon Islands Primary School Gross and Net Enrollment Rates



GER = gross enrollment rate, NER = net enrollment rate. Source: Ministry of Education and Human Resource Development, Performance Assessment Report, various years.

These and other education-related measures have led to a gradual increase in public spending for education (including development partner funded), both in nominal terms and in percent of GDP (from 7.4% in 2010 to 12.3% in 2014, and to 13.0% in 2017). However, much of the increase in spending has been directed toward the tertiary sector, rather than the primary sector, according to the Performance Assessment Report 2017 of the MEHRD (2018a). The imbalance was highlighted in the 2017 annual report of the MEHRD (2018b) whereby 2,756 tertiary students received an allocation of SI\$425 million, while 216,137 students in the early childhood education, primary, and secondary levels were allocated around half that amount (SI\$224 million).

Despite the encouraging sign of NERs exceeding 90% since 2016, long run data indicates the slow progress (and at times, deterioration) in achieving universal primary education. The significant difference between NER and GER indicates that a large proportion of children enrolled fall outside the official age group. On a positive note, the gap between male and female enrollment rates has narrowed over time. In 2007, there was a 6 percentage points difference between male and female net enrollment rates which narrowed to 2 percentage points in 2017 (Figure 10).

Strategies for dealing with these challenges are contained in the government’s Education Strategic Framework 2016–2030 (MEHRD 2016). Along with improving the access and quality of education services, the Framework calls for the adoption of policies to address the needs of adults who remain illiterate.

PROVINCIAL DISPARITIES IN EDUCATION ACCESS IN VANUATU

Vanuatu’s 2009 census revealed that education outcomes differed among provinces. Shefa Province, which includes the capital Port Vila, had the highest literacy rate of around 95% (Figure 11). While Tafea, the southernmost province which is also the most geographically dispersed, had the lowest literacy rate of around 64%. The disparity in literacy rates between males and females was also most significant in Tafea.

Vanuatu aspires for universal access to education, especially at the primary level. To achieve this, the government introduced the School Grants Program in 2010 to provide “increased grants to primary schools for students in years 1–6, with the intention that in most cases schools will not charge any school fees at all for students in years 1–6. Some schools will continue to charge school fees, but at a much reduced rate” (Ministry of Education 2010).

With support from Australia, New Zealand, and other bilateral and multilateral agencies, school grants have led to improvements in access and resourcing at different education levels. In 2017, grant funding was extended from kindergarten to year 8. However, community consultations conducted by the Ministry of Education and Training (MOET) reveal that parents continue to provide “contributions” to the school making “free tuition” as per the government policy an aspirational goal (Australia DFAT 2018, MOET 2018c).

The government's recurrent expenditure on education, mainly through the MOET, has gradually increased from an average of Vt2 billion (2000–2005) to Vt3.2 billion (2007–2009). A significant jump to Vt3.7 billion was seen in 2010 with the implementation of the school grants program, eventually rising to Vt5.0 billion in 2017 (MOET 2018a). However, recurrent spending as a percentage of GDP remained relatively flat below 5.6% of GDP from 2008 to 2017.

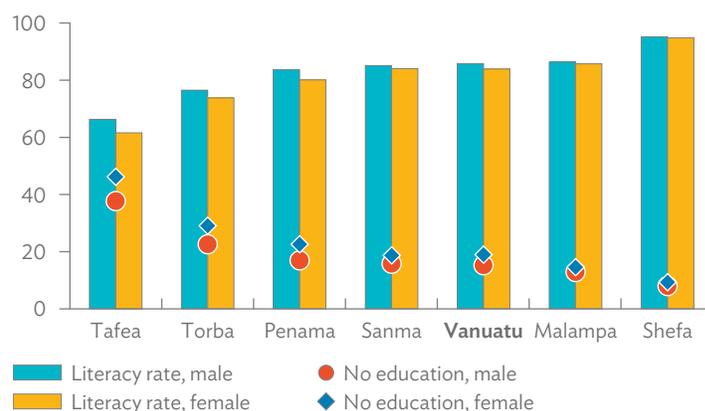
While all provinces registered improvements in terms of school attendance from 2009 to 2016, progress in some provinces lagged. In 2016, for example, only 7.0% of primary school-aged children were not attending school in Shefa Province which includes the capital Port Vila, while more than 20.3% did not attend school in Tafea (Figure 12).

Recent data from the MOET indicates a significant difference between net and gross enrollment rates for primary school, reflecting the problem of overage students (Table 2). On a positive note, there was no difference in primary education enrollment between males and females in Sanma and Penama Provinces. However in Tafea, there was a significant enrollment disparity in favor of males.

Net enrollment rates for early childhood education, primary and secondary, were all higher in 2018 than they were a decade ago. While progress was gradual for primary and secondary school enrollments, early childhood care and education enrollments jumped in 2017, following the expansion of the school grants scheme (Figure 13).

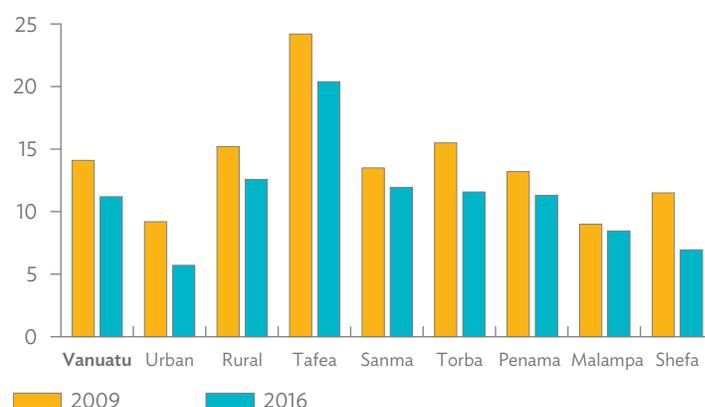
To continue pursuing its goals in improving education services and outcomes in Vanuatu, the government laid out its plans in the 2018–2020 MOET Corporate Plan, which includes the expansion of the school grants program from grades 7 to 10 by 2020 (MOET 2018b). The plan also seeks to understand and resolve why some children are out of school or at risk of dropping out. Innovative approaches to improve education access and quality will also be needed given the various challenges faced by students.

Figure 11: Vanuatu Education Outcome by Gender and Province, 2009



Note: Figures based on population aged 15 and above.
Source: Vanuatu National Statistics Office 2009 Census.

Figure 12: Vanuatu Children 6–13 Years Old Not Currently Attending Schools (%)



Sources: Vanuatu National Statistics Office 2016 Mini-Census; 2009 Census.

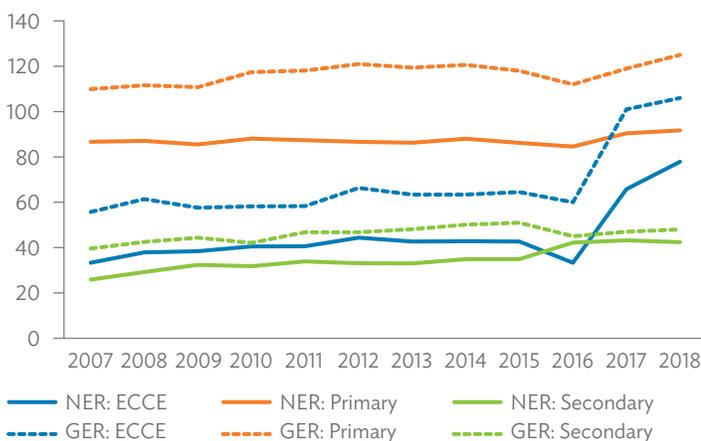
Table 2: Vanuatu Provincial Profiles

Province	Population, 2016	Population Density, 2016 (per square kilometer)	Gross Enrollment Rate (GER), Primary, 2018	Net Enrollment Rate (NER), Primary, 2018	Gender Parity Index (GPI), NER, Primary, 2018
Torba	10,161	12	117.3	81.8	1.08
Sanma	4,184	13	131.4	96.6	1.00
Penama	32,534	27	122.0	87.6	1.00
Malampa	40,928	15	140.4	104.8	0.97
Shefa	97,602	65	99.1	77.3	0.98
Tafea	37,050	23	163.5	110.8	0.89
Vanuatu	272,459	22	125.0	91.7	0.97

Notes: GPI greater than 1 indicates that more females than males are enrolled. NER theoretically can only reach up to 100, NER greater than 100 may indicate statistical or measurement issues.

Sources: Ministry of Education and Training, Statistical Digest Report, various years; Vanuatu National Statistics Office 2016 Mini-Census.

Figure 13: Vanuatu Gross and Net Enrollment Rates



ECCE = early childhood care and education, GER = gross enrollment rate, NER = net enrollment rate.

Sources: Ministry of Education and Training, *Statistical Digest Report*, various years.

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Employment trends in Papua New Guinea

Lead author: Edward Faber

The last census in mid-2011 recorded the population of Papua New Guinea (PNG) at 7.2 million people, reporting an annual average growth rate of 3.1% since the prior census in 2000. According to rough estimates from the Institute of National Affairs (INA), which are derived from unpublished census data, the labor force numbered 3.3 million people in 2011, equivalent to 46% of the overall population or 61.2% of the population aged between 10 and 64 (the “in-scope population”) (Table 3). From this, 3.2 million people were recorded as employed, either formally or informally, and 87,544 (2.6% of the labor force) were unemployed (i.e., seeking waged employment). Total formal sector employment was estimated at 360,732 (11.1% of those active in the labor market), meaning that 2.9 million people were engaged informally, largely in cash-cropping and subsistence agricultural activities.

More recent detailed jobs data is not available. However, the Bank of Papua New Guinea (BPNG), the central bank, publishes an employment index based on its regular business liaison surveys, from which it is possible to extrapolate. This data suggests that formal sector jobs grew to a peak of 397,667 in June 2013, 10.2% higher than in 2011, remained broadly static until June 2015 (392,614 jobs), and then began falling, to a low of 362,009 in December 2017 (a decline of 9.5% from the peak) (Figure 14). More recently, the index shows some small recovery, putting total formal sector jobs at 362,007 as of September 2018, 0.4% higher than in 2011, and 0.6% higher than December 2017.

The mining sector (including oil and gas) contributed 9,011 jobs (2.5% of total jobs) in 2011 (Figure 15). Mining sector jobs peaked in June 2013 at 16,679, toward the end of the PNG liquefied natural gas (LNG) construction phase and in a time of strong commodity prices. These then dropped to a low of 13,067 in March 2015 (a 22% decline from the peak), after the PNG LNG construction ended and when commodity prices were weakest. Mining sector jobs have since rebounded to 16,298 (higher by 24.7%) as of September 2018, indicating that the mining and petroleum sector has been on the up in PNG in recent years despite the weaker overall economic context.

Jobs outside of the mining sector also peaked in 2013 at 383,005, 8.9% higher than in 2011, or 17.7% higher than in March 2010 (which was just before the start of the PNG LNG construction phase), showing how the non-mining sector also benefited from the PNG LNG construction and better commodity prices. In particular, construction jobs benefited, increasing from 38,547 in 2011 to 66,708 in September 2014 (Figure 16), before falling to a low of 37,209 in December 2017.

Manufacturing also peaked during 2013, at 17,351 jobs, 12.6% higher than in 2011. This sector benefited from demand created by the PNG LNG construction, as well as greater availability of foreign exchange. However, manufacturing jobs showed a declining trend after 2013, falling to a low in September 2017 of 14,058 (a decline of 18.9% from the peak). The manufacturing sector has struggled more recently due to foreign exchange shortages and associated exchange rate misalignment.

Table 3: Estimated Population and Employment in Papua New Guinea

	2011 (INA estimates)	2018 (ADB and ILO estimates)	% Change
Total population	7,254,442	8,982,861 ^a	23.8
In-scope population (aged between 10 and 64 years)	5,453,542
Labor force	3,336,007	4,207,247 ^b	26.1
(% of in-scope population) ^d	61.2		
(females % of labor force)	47.6		
Employed	3,248,463	4,107,824 ^b	26.5
Formal (waged employment)	360,732	362,007 ^c	0.4
Informal employment	2,887,731	3,745,817	29.7
Unemployed	87,544	99,423 ^b	13.6
(unemployment ratio)	2.6%	2.4% ^b	
(youth unemployment ratio)	...	4.3% ^b	
Not in the labor force	2,101,348	...	
Not stated	16,187	...	

... = data not available, ADB = Asian Development Bank, ILO = International Labour Organization, INA = Institute of National Affairs.

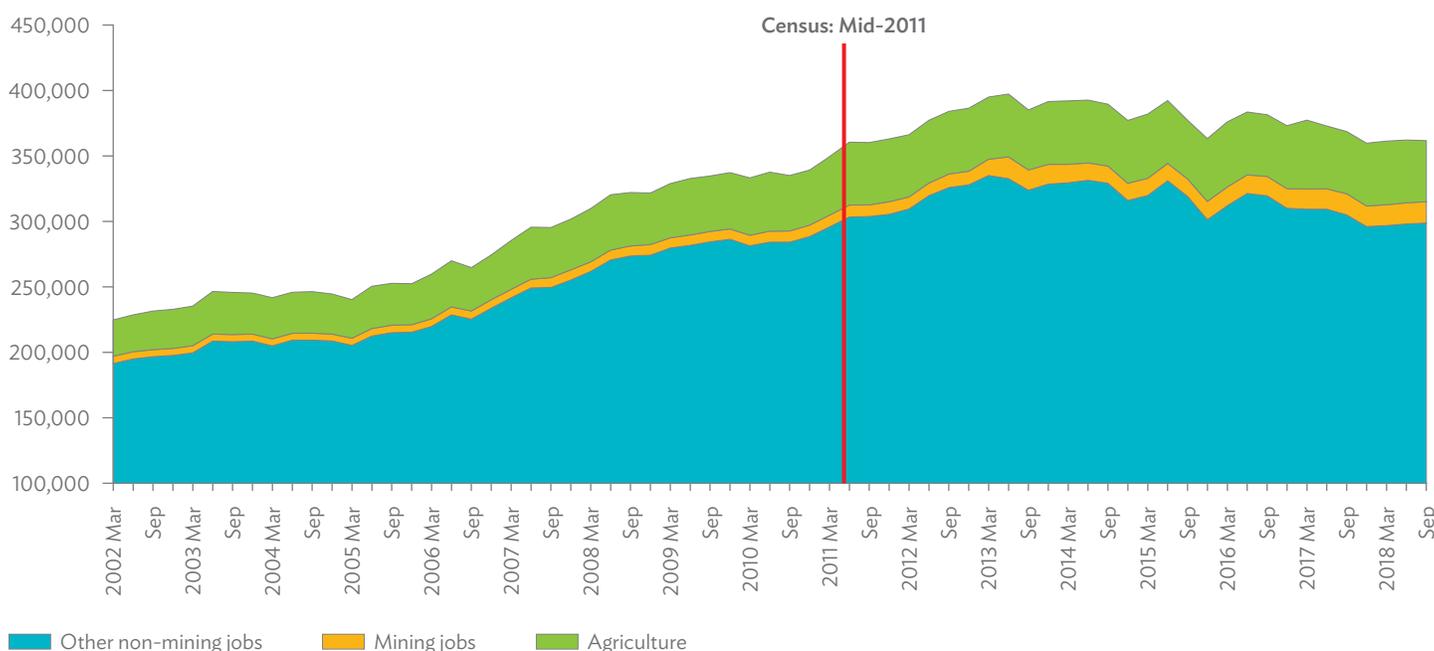
^a Estimate, using 3.1% population growth.

^b ILO modeled estimates for 2018, adjusted for population growth calculation.

^c Derived from the Bank of Papua New Guinea index.

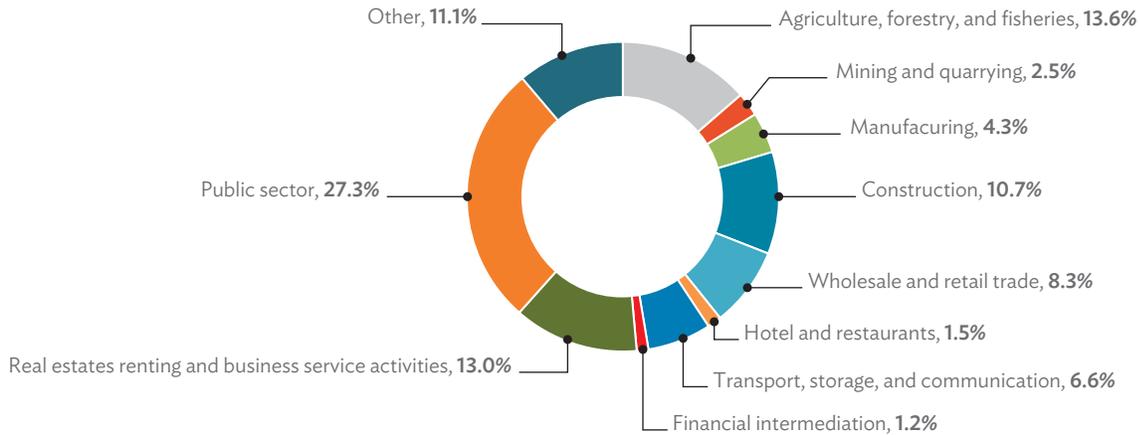
^d Similar to labor force participation rate (aged between 15 and 64); however, in-scope population includes those aged between 10 and 15.

Sources: L. T. Jones and P. A. McGavin. 2015. *Grappling Afresh with Labor Resource Challenges in Papua New Guinea: A Framework for Moving Forward*. Institute of National Affairs Discussion Paper No. 96. Port Moresby; Bank of Papua New Guinea Quarterly Economic Bulletin statistical tables; and International Labour Organization ILOSTAT Database.

Figure 14: Formal Sector Jobs in Papua New Guinea

Sources: L. T. Jones and P. A. McGavin. 2015. *Grappling Afresh with Labour Resource Challenges in Papua New Guinea: A Framework for Moving Forward*. Institute of National Affairs Discussion Paper No. 96. Port Moresby; and Bank of Papua New Guinea Quarterly Economic Bulletin statistical tables.

Figure 15: Formal Jobs by Sector in Papua New Guinea, 2011
(Institute of National Affairs estimates)



Source: L. T. Jones and P. A. McGavin. 2015. *Grappling Afresh with Labour Resource Challenges in Papua New Guinea: A Framework for Moving Forward. Institute of National Affairs Discussion Paper No. 96.* Port Moresby.

The public sector, which the Institute of National Affairs estimates accounted for 98,850 jobs in 2011, does not appear as a stand-alone category within the BPNG index and is included under “financial, business, and other services.” This index category also includes real estate and business services (46,868 jobs). According to the BPNG index, this category added 9,240 jobs between 2011 and June 2013, before shedding 10,424 jobs between June 2013 and December 2016. Since December 2016, jobs in this category have surged by 14,869. In part, this may be linked to increased public sector recruitment. According to the 2018 final budget outcome, 5,000 new staff were employed in 2018 across education, health, disciplined forces, and tax collection.

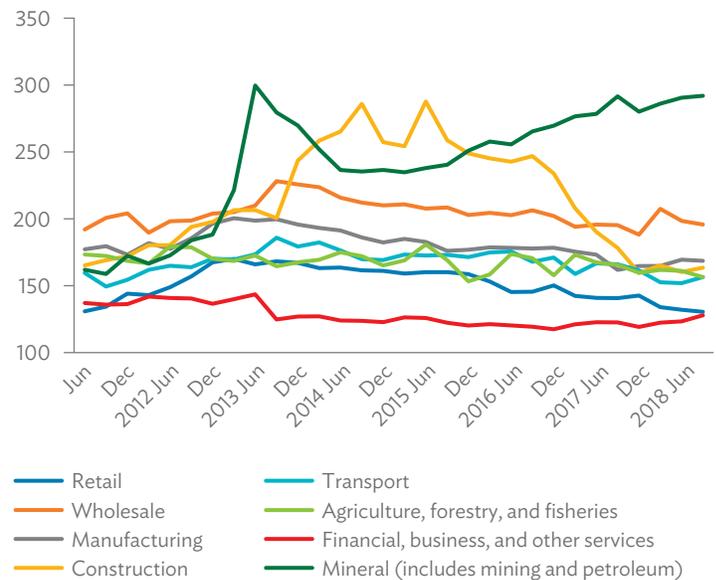
The agriculture, forestry, and fisheries sector exhibits a more volatile trend. Jobs in this sector peaked at 48,073 in mid-2011, which was a time of relatively high coffee and cocoa prices. Jobs then reached a low point (42,498) in December 2015, a year of drought and relatively low commodity prices.

Combined, total jobs in the non-mining sector reached a low point in December 2017 of 344,422, 2.1% below 2011 levels, and the overall pickup since then has been marginal, with jobs in non-mining standing at 345,709 as of September 2018, 1.7% below June 2011.

On the one hand, the trend in formal sector jobs is not surprising, given the stressed economic conditions over the recent years, including reduced government spending, foreign exchange shortages, and weaker commodity prices. Yet, on the other hand, this is somewhat contrary to the overall trend of growth, with real GDP having expanded by 45.1% between 2011 and 2018, or by 16.6% if only the non-mining part of the economy is considered.

Closer analysis of GDP reveals that around half of the 16.6% growth in the non-mining economy in recent years has come from the agriculture, forestry, and fisheries sector. Much of this relates to informal activities (an estimate for which is included in PNG’s GDP calculation). This, then, correlates to the large expansion in the informal sector over that last several years. Informal work is estimated to have expanded by 26.5% from 3.2 million in 2011

Figure 16: Papua New Guinea Employment Index
(March 2002 = 100)



Source: Bank of Papua New Guinea.

to 4.1 million in 2018 (Table 3). Much of this is due to population growth, estimated at 23.8% over the period. Increased access to markets due to new infrastructure, such as roads, has also contributed to informal employment growth.

Two other important trends to reflect upon are the ratio of women to men in the workforce, and youth employment. Data on formal sector employment by gender is not available, but data on overall employment (formal and informal) reports that women constitute just under half (48.2%) of employed people. In fact, the ratio may well be higher since women in PNG tend to be more involved than men in production and sale of agricultural produce. However, women’s participation in the public sector is lower, estimated at 38% in 2013.

In 2013, women accounted for more health workers than men (54%), but held fewer administrative positions (24%) and teaching posts (42%).

Data on unemployment is perhaps misleading. The International Labour Organization estimate for 2018 is 2.6%, but this only includes those actively seeking formal sector employment and says nothing of those seeking informal employment or those outside of the labor force. The International Labour Organization estimate for urban youth unemployment for 2018 is higher at 4.3%, although, again, this does not accurately reflect the actual number of youths that need jobs, which is significant and recognized as a central challenge for the government.

SUMMARY

More detailed data on employment would be welcome to help inform economic policy makers. Hopefully, the next census in 2021 will shed more light on employment trends.

Employment data shows that most job growth in recent years has been in the informal sector. Job growth in the formal sector has been very limited, rising in the boom years and peaking in 2013, but declining thereafter; although, more recently there has been some marginal recovery in 2018.

To generate more jobs in the formal sector, economic policy needs to tackle key issues such as making more land available for investment and exchange rate misalignment, while maintaining macroeconomic stability and fiscal prudence. This will encourage businesses and more international investors—who bring with them capital and know-how—to do more business and invest in PNG.

Expanding opportunities for technical and vocational education in PNG is also needed, so that Papua New Guineans can fill the jobs that are created by the private sector, as it expands.

Finally, citizens of PNG, especially youths, need to be given more opportunities to work abroad, especially in agriculture, where they can gain valuable skills and can accumulate capital, which in turn can be used to start businesses when they return home to PNG.

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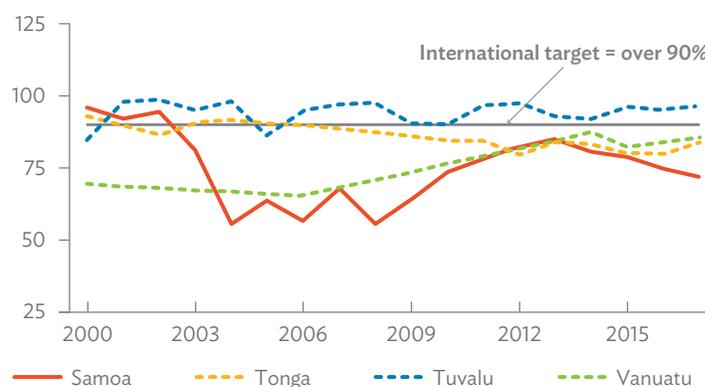
A shot in the arm for public health in Samoa

Lead author: Cara Tinio

Child mortality in the Pacific region has fallen by 32% since 1990 toward achieving Millennium Development Goal 4, thanks in part to primary health-care systems that provide routine vaccination (e.g., for tuberculosis, hepatitis B, polio, measles-rubella, and tetanus) to much of the population. Today, the Pacific is working toward achieving Sustainable Development Goal 3, which aims, among others, to end preventable deaths of newborns and children under 5 years old by 2030.

Like most other Pacific countries, most primary health services delivered in Samoa are publicly financed with development partner financing for more specialist services. However, the quality of primary health services has declined with a reduced health workforce, drug shortages and accessibility challenges. These factors have contributed to a deterioration in routine immunization coverage rates that, in recent years, have fallen short of the international target of over 90% (Figure 17). This development highlights that there is room to further strengthen routine immunization services in the country and the primary health-care system more broadly.

Figure 17: The Percentage of Children in Samoa Receiving Routine Vaccinations Has Fallen Short of the International Target



Note: This figure shows coverage of the following vaccines: BCG (for tuberculosis); DPT (for diphtheria, pertussis/whooping cough, and tetanus); HepB3 (for Hepatitis B); measles; and Pol3 (for polio). The BCG, HepB3, and Pol3 vaccines are administered to 1-year-old children, while the DPT and measles vaccines are administered to those aged between 12 and 23 months.

Source: World Bank. *Health Nutrition and Population Statistics*. <https://databank.worldbank.org/source/health-nutrition-and-population-statistics> (accessed 24–26 June 2019).

Samoa's immunization program procures vaccines through the Vaccine Independence Initiative, a pooled procurement facility under the United Nations Children's Fund, but this does not include three routine vaccines recommended by the World Health Organization, namely the human papilloma virus (HPV), pneumococcal conjugate (PCV), and rotavirus vaccines. These are substantially more expensive than traditional vaccines, and successfully introducing them into the health-care system requires significant investments in cold chain equipment and health worker training, among others.

Additional costs to travel “the last mile” and roll out these vaccines to remote communities can also be significant, particularly in the Pacific. As a middle-income country, Samoa is ineligible for support from partners such as Gavi, an international organization that has helped poorer countries overcome such hurdles.

The HPV, PCV, and rotavirus vaccines target cancer-causing HPV, pneumonia, and diarrhea, respectively. Pneumonia and diarrhea are two of the top three causes of mortality in under-5 children worldwide, and leading reasons for hospitalization in Samoan children. Diarrhea also accounts for 6% of deaths among children under 5 in Samoa, higher than the global average of 2%. Meanwhile, HPV types 16 and 18 cause about 70% of all cases of cervical cancer. Cervical cancer is becoming more frequently reported in the Pacific and, even with limited local capacity for diagnosis and treatment, estimated to be the second leading cause of death among women in most countries in the region.

Mindful that high migration raises exposure to outbreaks of imported diseases and other threats to regional health security, and the rising danger and attendant burdens of cervical cancer, the Strategy for the Development of Samoa 2016/17–2019/20 highlights national immunization as one way of reducing infant and maternal mortality and safeguarding public health and well-being. It also seeks to improve the quality of and access to primary health care, particularly in rural areas. The strategy recognizes that these outcomes would ultimately support progress toward achieving Sustainable Development Goal 3.

An ongoing ADB project aims to support public health outcomes in Samoa, as well as three other Pacific DMCs, by funding procurement, through the Vaccine Independence Initiative, and the introduction of the HPV, PCV, and rotavirus vaccines as well as related cold chain equipment and supplies. It will support at least 90% of health facilities to plan for rollout to selected priority communities, and vaccine forecasting nationwide to ensure adequate supplies even in times of emergency. Further, the project will help build procurement capacity to help make planning and procurement of health commodities more effective.

The introduction of these vaccines paves the way for efforts to strengthen primary health care and make health services more accessible. The project will support the (i) development of updated immunization and cold chain policies, guidelines, and training materials; (ii) training of health workers in administering vaccines, supply-chain and waste management, and preventative maintenance, among others; (iii) capacity building of health staff in evidence-based planning and bottom-up budgeting; (iv) reporting of sex-disaggregated immunization data integrated in the broader health information system; and (v) conducting nationwide immunization coverage and other surveys to assess the quality and equity of vaccine management.

Finally, the project will assist the Ministry of Health, in partnership with other stakeholders, to improve public awareness and acceptance of vaccination. Besides promoting better health-seeking behavior and vaccine acceptance, such efforts would engage the community in spreading messages on the importance of vaccination.

The project is in the first stage of implementation, but promises to be a significant step in safeguarding public health in the region. By including the PCV, HPV, and rotavirus vaccines, it would benefit women and children under 5 years old, particularly those from low-income households for whom these diseases would be relatively more costly. Women and under-5 children have specific health needs and women may have different levels of access to, or understanding of, information about disease prevention and treatment. By adopting a regional approach, the project can lower implementation costs through bulk procurement and pooling resources. Finally, by helping to strengthen management capacity in Samoa, the project would make the health-care system more efficient and sustainable, and extend the reach of its services to low-income groups in more remote regions of the country.

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Improving nutrition in Timor-Leste

Lead author: David Freedman

The author acknowledges inputs from the following reviewers: Professor Brett Inder, Carmeneza Monteiro, Gianna Bonis-Profumo, World Health Organization, World Food Program, United Nations Children's Fund, and La'o Hamutuk.

Timor-Leste is in the midst of a silent emergency. Despite good progress in improving health services, almost half of all children aged under-5 show signs of serious undernutrition. Poor nutrition among mothers and young children poses an immediate burden on health and reduces the productive potential of the population now and in the future. This policy brief presents a summary of key trends in child nutrition in Timor-Leste since independence, considers some of the causes of poor nutrition, and discusses measures to accelerate ongoing improvements in nutrition.

PROFILE AND ECONOMIC IMPACT OF UNDERNUTRITION

The overall health of Timor-Leste's population has improved markedly since 1990. In 2002, when the country regained independence, it faced a similar burden from disease and other factors as other Pacific island countries, with an average of 48,767 disability adjusted life years lost per 100,000 of population.¹² In the years since then, the health of the population has surpassed the average seen in the Pacific and has steadily converged to the average level seen in Southeast Asia (Figure 18). This progress is the result of concerted efforts to develop an effective public health system, with steady improvements in health facilities and staffing, improved coverage of vaccinations, better prenatal and postnatal care, and successful campaigns to tackle communicable diseases such as malaria.

Despite this progress, Timor-Leste continues to have one of the highest rates of childhood undernutrition in the world (Figure 19). The nutritional status of young children can be assessed using a range of different measures (see Box 1). In Timor-Leste, the most pressing concerns relate to micronutrient deficiency and the various forms of undernutrition in which growth is interrupted. Of these, stunting is a key concern. During 2002–2013, the prevalence of stunting in children aged below 5 years declined at an average rate of 0.3% per annum (Figure 20), falling from a peak of 57.7% in 2009, to 50.2% in 2013. There was less progress in reducing the prevalence of low weights. Unfortunately, problems with the quality of the anthropometric data collected for the 2016 Demographic and Health Survey mean that no nationally representative measures of undernutrition are available after 2013. However, all stakeholders in Timor-Leste agree that undernutrition remains a serious concern.

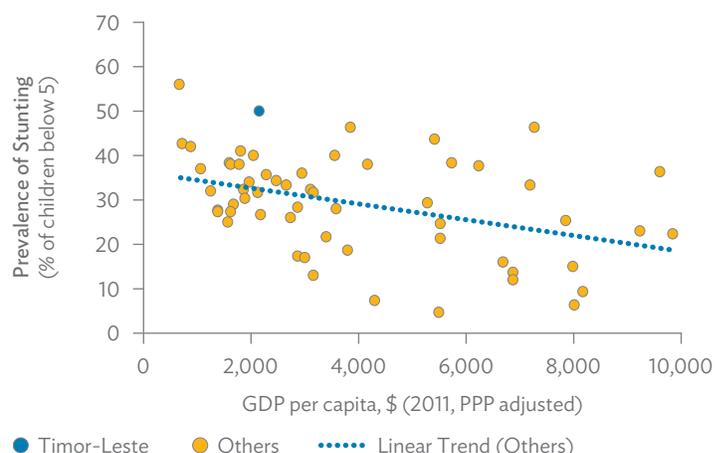
Undernutrition in young children leads to an increased burden from other illnesses, higher rates of mortality, and permanent reductions in cognitive ability. Nearly a third of child deaths in the country can currently be linked to poor nutritional status of either the mother or the child. Cross-country analysis has shown that children who are stunted typically begin school later, have lower educational attainment, and earn lower wages as adults. Part of the link between

Figure 18: Disability-Adjusted Life Years Lost per 100,000 People



Source: Institute for Health Metrics and Evaluation. 2017. *Global Burden of Disease*. Washington, DC.

Figure 19: Prevalence of Stunting in Timor-Leste and Other Countries



PPP = purchasing power parity.

Sources: World Development Indicators; Timor-Leste National Accounts, 2000–2016.

Figure 20: Prevalence of Stunting, Wasting, and Underweight in Timor-Leste (% children aged under-5)



Source: World Development Indicators.

Box 1: Measuring Nutrition

The nutritional status of young children can be measured by comparing anthropometric measures that compare the height and weight of the child to reference values which reflect observed growth in a well-nourished reference population. Adequacy of micronutrients can be tested by measuring the concentration of these nutrients in the blood or by screening for physical symptoms of micronutrient deficiency. Faltering growth can be identified through three related measures:

Stunting: A child is considered to be stunted if their height is more than 2 standard deviations below the reference height for children of equivalent age. The presence of stunting indicates chronic undernutrition. A child with height that is more than 3 standard deviations below the reference is considered to be severely stunted.

Underweight: A child is considered to be underweight if their weight is more than 2 standard deviations below the reference weight for well-nourished children of their age. The underweight measure integrates chronic undernutrition, which results in reduced stature and weight, and more acute forms of undernutrition which may result in temporary weight loss. A child with weight-for-age that is more than 3 standard deviations below the reference is considered to be severely underweight.

Wasting: A child is considered to exhibit wasting if their weight is more than 2 standard deviations below the reference weight for a child of their height. Since wasting does not consider the child's age, it provides a measure of current nutritional status. A child with weight-for-height that is more than 3 standard deviations below the reference is considered to be severely wasted.

Source: World Health Organization.

undernutrition and poor educational performance is due to the impact of nutrition on physical health. However, the impact of poor nutrition on cognitive development may be even more significant. The first 1,000 days of life, spanning the time from conception to age 2, have been identified as a critical period of brain development. Children who suffer from undernutrition during this stage of life show marked differences in brain development and poorer performance on standardized tests of intelligence. Shortages of micronutrients such as Iron, Zinc, and Vitamin A, can also have a major impact on cognitive development.

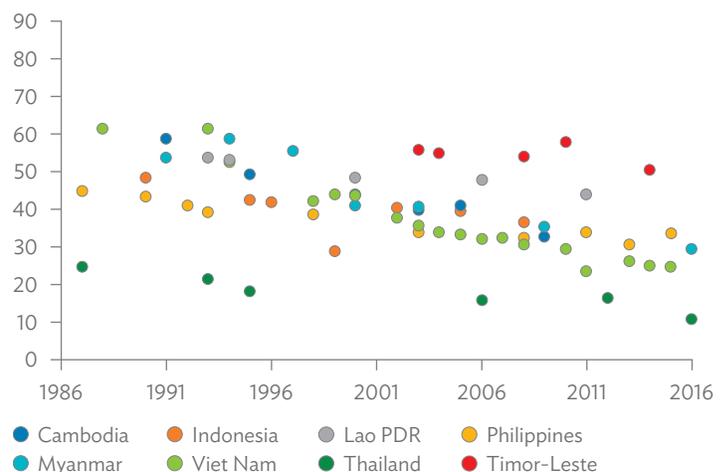
Children who are stunted are likely to experience a permanent reduction in their lifetime earnings as a result of undernutrition. The cumulative impact of lower individual productivity can be significant in countries that have experienced high levels of undernutrition in the recent past. These impacts are long lived, as adults typically spend 40–50 years within the working age population. A 2014 analysis estimated that the current cost of undernutrition in Timor-Leste is \$41 million per annum.³ This analysis used relatively conservative assumptions to model the loss of earnings. With less conservative assumptions the estimated annual cost of undernutrition rises to up to \$84 million per annum.⁴ This is consistent with evidence from cross-country analysis. For example, it is estimated that childhood undernutrition reduced global GDP by 8% per annum during the 20th century and reduces the current GDP of countries in Africa and Asia by 4%–11%.⁵ Applying this range to Timor-Leste implies that the current cost of undernutrition ranged from \$65–\$180 million in 2016.

The legacy of past undernutrition will have far-reaching impacts in Timor-Leste. Even if undernutrition was eliminated tomorrow, the country would continue to experience some loss of productivity until around 2080 when the last workers who experienced undernutrition as children reach retirement age. There is therefore

an urgent moral and economic case for investing in improved nutrition. Assessments of different interventions for improving nutrition have found that the benefits exceed the costs by a factor ranging from 4, to as high as 35.⁶ These analyses are sensitive to the assumptions used, and in particular to the discount rate that is applied to children's future earnings, but the overall picture is clear.

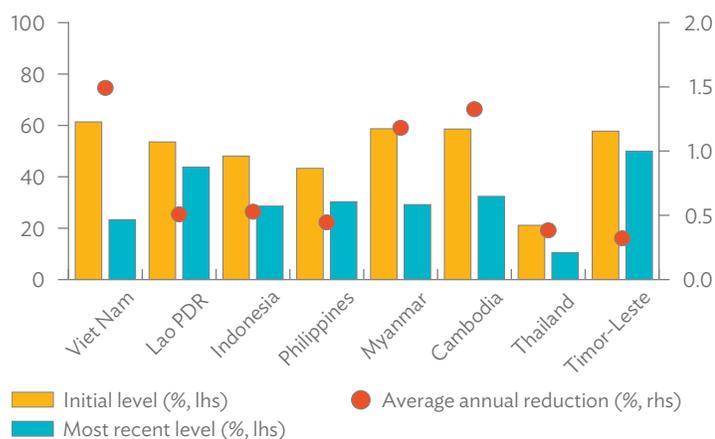
Timor-Leste won't be able to eliminate undernutrition overnight. During 2002–2013, the prevalence of stunting declined at an average rate of 0.3% per annum. This is relatively low when compared to the annual rates of reduction that were achieved by some other Southeast Asian countries during 1987–2016 (Figures 21–22).

Figure 21: Prevalence of Stunting (%) in Selected Southeast Asian Countries, 1986–2016



Lao PDR = Lao People's Democratic Republic.
Source: World Development Indicators.

Figure 22: Prevalence of Stunting in Children Aged Under-5 in Selected Southeast Asian Countries, 1986–2016



Lao PDR = Lao People’s Democratic Republic, lhs = left-hand scale, rhs = right-hand scale.

Sources: World Development Indicators; ADB staff estimates.

In principle, there are no inherent reasons why undernutrition could not be rapidly eliminated. The speed with which undernutrition can be tackled will determine how many children suffer from malnourishment in the years ahead, and how many adults enter the workforce with impaired productivity so it is imperative to look for measures to accelerate the ongoing improvement in childhood nutrition (Figure 23).

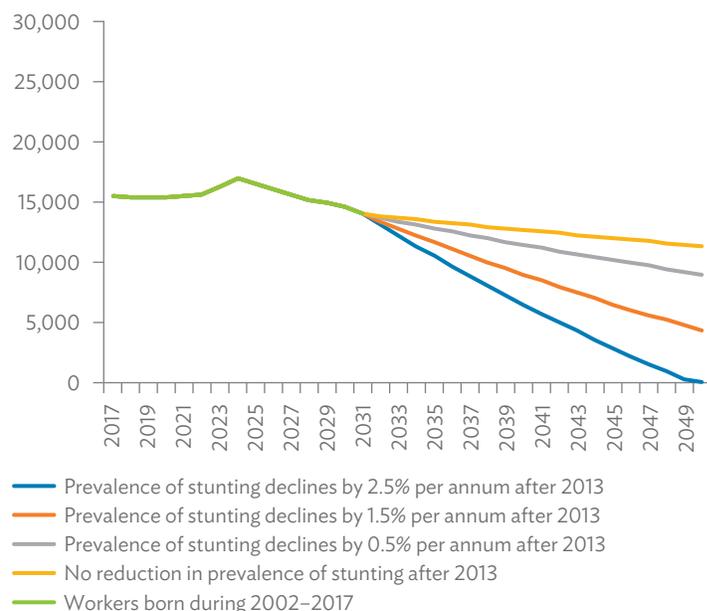
UNPACKING THE CAUSES OF UNDERNUTRITION

The immediate causes of undernutrition are disease and inadequate diet (Figure 24). Underlying causes include a lack of food, poor sanitation, poverty, illiteracy, high fertility rates and high rates of teenage pregnancy. In Timor-Leste the prevalence of stunting in children aged under-5 increases as children grow from newborn babies into toddlers (Figure 25). This pattern is partly caused by poor feeding practices. The World Health Organization recommends that newborn babies should be breastfed within 1 hour of birth and should be fed exclusively on breast milk during the first 6 months of their life. Beginning at 6 months of age, parents are advised to begin to introduce other foods as a supplement to breast milk, and to gradually progress to a diverse diet of solid foods while continuing to include breast milk in the diet until the child reaches 24 months.

In 2009, 81.7% of babies began breastfeeding within the first hour of birth. However, by 2016 this had fallen to 75.2%. In 2016, only 63.7% of newborn babies were exclusively breastfed and this declines rapidly as children approach 6 months of age (Figure 26). While two-thirds of babies transition from exclusive breastfeeding before the recommended age, only 12.0% of babies continue feeding only on “breast milk and water” throughout the first year.

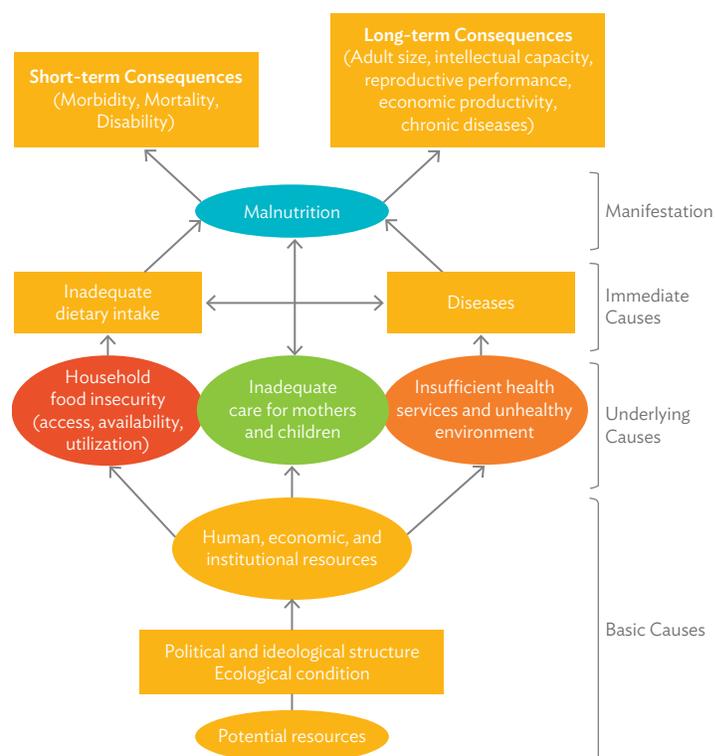
There is also evidence that parents struggle to manage the introduction of solid foods and ensure sufficient nutritional diversity and frequency of feeding. The proportion of children aged 6–23 months who receive breast milk or a suitable substitute as part of

Figure 23: Number of New Additions to Working Age Population Who Experienced Stunting as Young Children



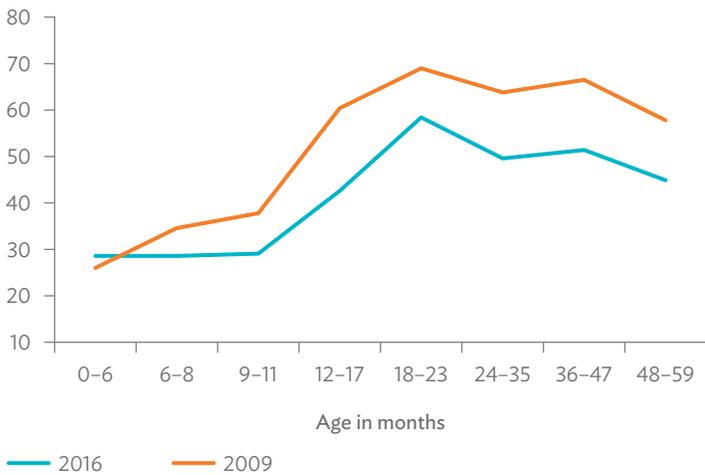
Sources: Timor-Leste 2015 Census, Population projections, ADB staff estimates.

Figure 24: Conceptual Framework on Causes of Malnutrition in Timor-Leste



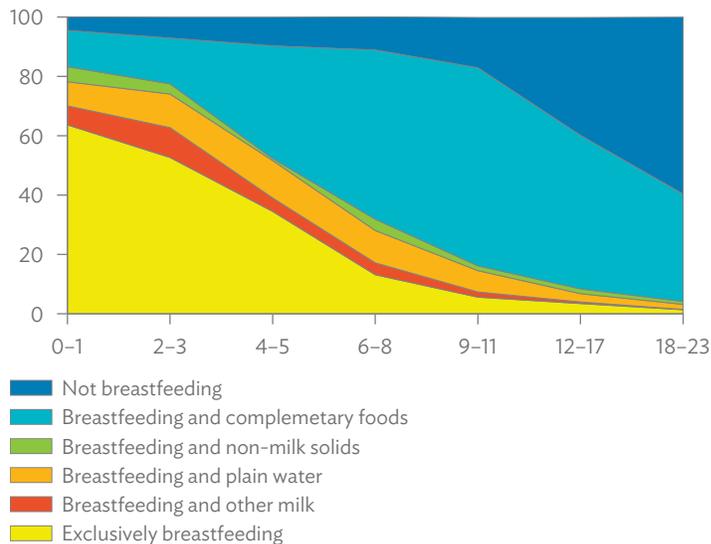
Source: Government of Timor-Leste. 2014. *Timor-Leste National Nutrition Strategy, 2014–2019*. Dili.

Figure 25: Incidence of Stunting in Timor-Leste
(% of children aged 0–59 months)



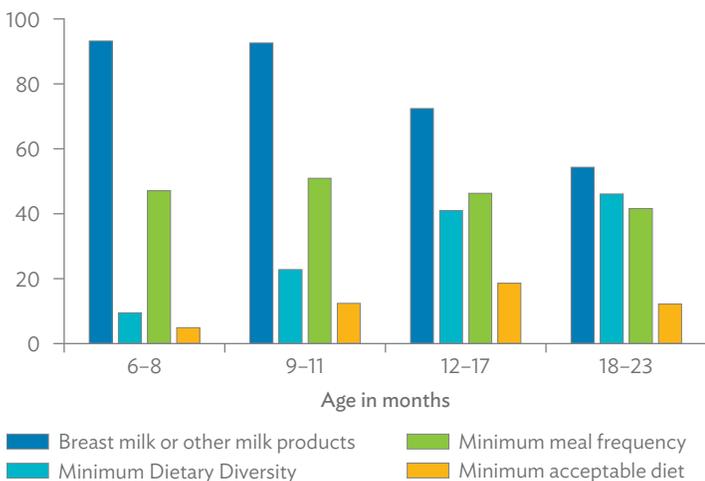
Sources: Timor-Leste Demographic and Health Survey, 2009–10; Timor-Leste Demographic and Health Survey, 2016.

Figure 26: Dietary Composition of Children in Timor-Leste
Aged 0–23 Months



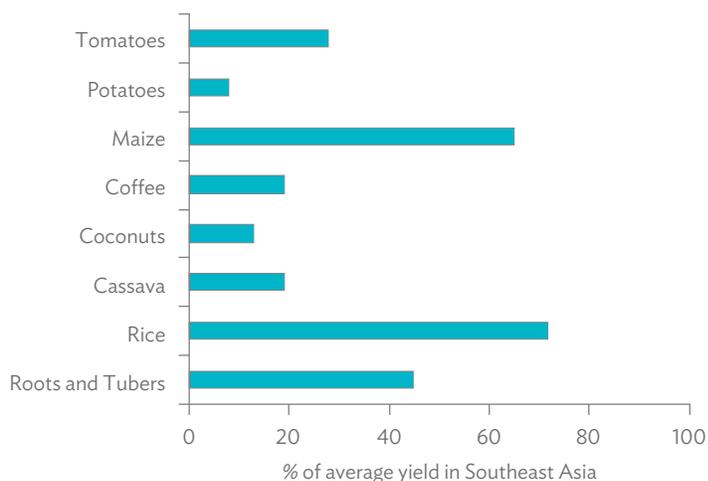
Source: Timor-Leste Demographic and Health Survey, 2016.

Figure 27: Diet and Feeding Patterns for Children in Timor-Leste, 2016
(%)



Source: Timor-Leste Demographic and Health Survey, 2016.

Figure 28: Productivity of Selected Food Crops in Timor-Leste
(yield as a % of average yields in Southeast Asia)



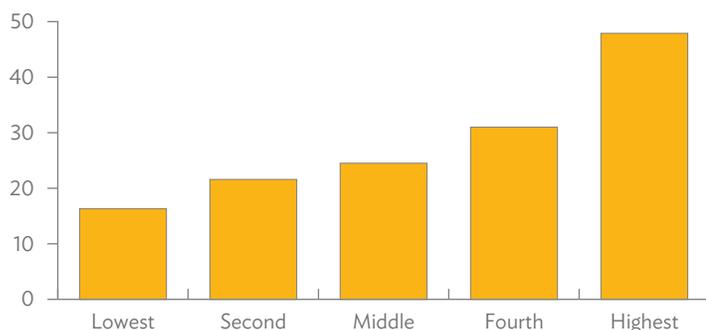
Source: Food and Agriculture Organization Statistical Database, adapted from Williams, R. and M. Goncalves. 2017. *What are the main drivers of childhood stunting in Timor-Leste?* Dili.

their diet declines steadily with age (Figure 27). Few children aged 6–12 months are provided with sufficient dietary diversity and less than half of children at all ages are fed often enough to achieve good nutrition.⁷ As a result, only 13.3% of children aged 6–23 months receive a “minimum acceptable diet” which includes breast milk or a substitute, has sufficient diversity, and is provided with sufficient regularity. This also contributes to deficiencies in micronutrients, with 40.3% of children aged under-5 suffering from iron deficiency.

Poor infant feeding practices also reflect broader problems with food availability. Recent analysis suggests that around one third of Timor-Leste’s population suffers from chronic food insecurity and this is partly due to low agricultural productivity. In 2015, 73.4%

of all households in Timor-Leste lived in rural areas and 46.0% of households were involved in subsistence agricultural production. Yields for most crops are extremely low when compared to the averages for the rest of Southeast Asia (Figure 28). This contributes to reduced food intake and lower dietary diversity. Cross country analysis of data from 98 countries shows that average daily calorie intake is extremely low in Timor-Leste, with average daily intake of 1,920 kilocalories (kcal) per capita compared to a global average of 2,691 kcal per capita.⁸ The proportion of calories that are sourced from non-staple foods is also relatively low, with only 29% of calories in Timor-Leste sourced from non-staple foods compared to a global average of 46%.⁹

Figure 29: Proportion of Children Achieving Minimum Dietary Diversity, by Wealth Quintile
(% of children aged under-5)



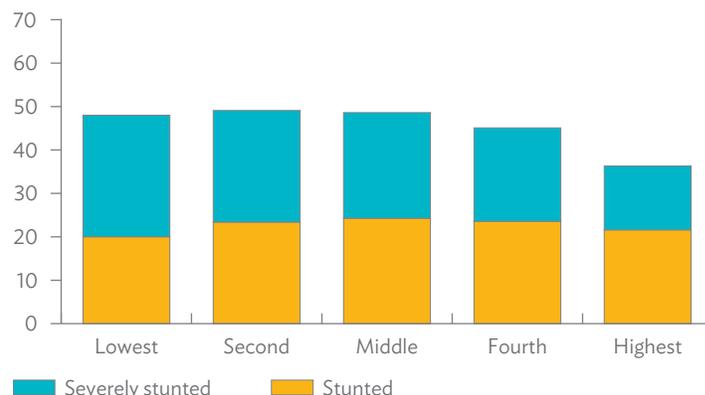
Source: Timor-Leste Demographic and Health Survey, 2016.

There is some evidence that wealthier households have better diets. Children in wealthier households are more likely to receive a diverse diet and appear less likely to be stunted (Figures 29–30). However, the incidence of stunting is still remarkably high in richer households. This reflects the relatively flat income distribution seen in Timor-Leste and gaps in knowledge about good nutrition that reduce households' ability to convert financial wealth into nutrition and health outcomes.

Analysis of data from the 2013 National Nutrition Survey found a statistically significant relationship between the height of a mother and the risk of her child being stunted, with women of short stature more likely to have children who experience stunting. Approximately 10.3% of women aged 15–49 are considered to have short stature and this highlights a potential challenge in breaking the inter-generational cycle of malnutrition. While these women may need special support, there is also a need to provide support to all mothers to reduce the risk of maternal mortality and improve the health and nutrition of their children. Approximately 26.6% of women aged 15–49 are underweight and 11.0% are severely underweight. Anemia (iron deficiency) is also an issue and affected 22.7% of women aged 15–49 in 2016.

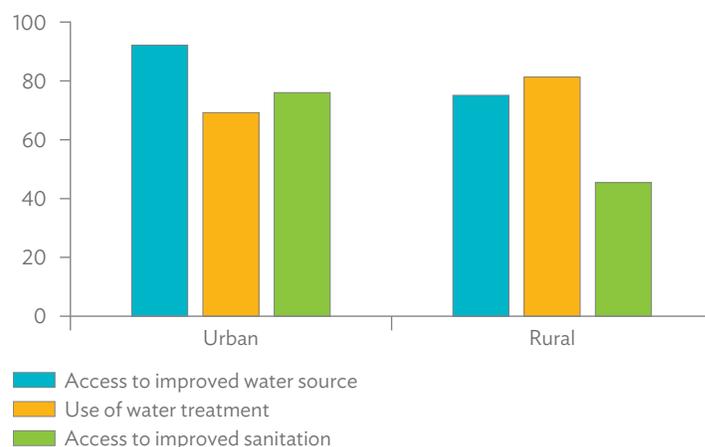
Cross-country studies have found clear evidence that access to clean water and improved sanitation is an important enabler of improved nutrition outcomes.¹⁰ The most recent Demographic and Health Survey highlighted that many households in rural areas still lack access to improved water sources, and that a significant proportion of households in both rural and urban areas do not treat water to ensure potability (Figure 31). However, analysis of survey data did not show a statistically significant relationship between households' access to improved water and sanitation and the nutritional status of young children within the household.¹¹ This is probably due to the way in which improvements in water and sanitation are defined and measured in Timor-Leste. However, it does seem clear that diarrheal diseases contribute to undernutrition. The 2016 Demographic and Household Survey found that 10.7% of children aged under-5 had suffered from diarrhea during the two weeks preceding the survey. The negative impact of frequent cases of diarrhea may be amplified by poor treatment. The survey also shows that relatively few households followed the recommended advice of treating diarrhea through increased fluid intake and feeding (Figure 32).

Figure 30: Prevalence of Stunting in Timor-Leste, by Wealth Quintile
(% of children aged under-5)



Source: Timor-Leste Demographic and Health Survey, 2016.

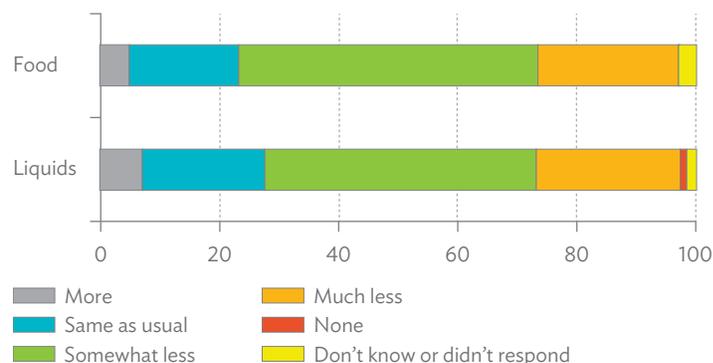
Figure 31: Access to Improved Water and Sanitation in Timor-Leste
(% of households)



Note: Appropriate water treatment includes boiling, bleaching, filtering, and solar disinfection.

Source: Timor-Leste Demographic and Health Survey, 2016.

Figure 32: Feeding Practices for Children Aged Under-5 with Diarrhea
(%)



Source: Timor-Leste Demographic and Health Survey, 2016.

Public health services play an important role in providing support to pregnant women and mothers of young children. Unfortunately, the health system is not currently able to identify and treat most underweight children. In 2018, the public health system identified 1,400 underweight children and provided remedial treatment to 1,156 of these children. However, based on the measured incidence of low weights, it is estimated that 7,900 children would have required treatment. Thus, the current system is only identifying around 17.7% of all cases of low weight. The failure to address acute undernutrition is likely to contribute to higher instances of stunting and points to one area where strengthening health services could lead to significant improvements in outcomes.

POLICY CONSIDERATIONS

The Government of Timor-Leste has committed to ending hunger and undernutrition and has developed policies and plans to achieve this goal. Timor-Leste's Strategic Development Plan, 2011–2030 and Roadmap for Achieving the Sustainable Development Goals both emphasize nutrition. In 2014, Timor-Leste was the first country in Asia to join the Zero Hunger Challenge. The associated action plan for eliminating hunger and malnutrition comprises 170 actions with an indicative budget of \$176 million over 10 years. This action plan is complemented by the National Nutrition Strategy 2014–2019 and the 2017 Food and Nutrition Security Policy.

Each of the policies and plans described above responds to a specific need. However, it has been noted that the proliferation of plans risks undermining the cohesion of efforts to tackle malnutrition.¹² Timor-Leste's National Council on Food Security, Sovereignty, and Nutrition (KONSSANTIL) was established in 2010 to promote inter-agency coordination on nutrition. KONSSANTIL is intended to operate at both the national and municipal levels and to monitor implementation of agreed plans. While the development of national policies and plans can be taken as a sign of political commitment, there is a need for greater urgency in tackling undernutrition.

A 2017 review identified several key challenges including gaps in coordination, challenges in translating national policies into practical local level action plans, lack of budgetary commitment, and lack of effective monitoring and accountability.¹³ Surveys of government officials working in nutrition related sectors have confirmed a good understanding of the causes and consequences of undernutrition.¹⁴ However, the high prevalence of undernutrition in women and young children means that poor nutritional outcomes are likely to be normalized within the general population. To put it simply, because almost half of all young children are stunted, parents who compare their own children with the wider population may fail to identify nutrition problems.

A well-designed program of communication to households could help to ensure that parents truly understand the requirements for achieving good childhood nutrition and the implications of malnutrition. Strong leadership from high profile national leaders would help to ensure the effectiveness of this communication and create a stronger sense of shared purpose in tackling undernutrition.

In order to be effective, efforts to improve communications should be allied with additional resources to implement nutrition related programs, expand access to nutritious and affordable foods, and strengthen the systems for monitoring progress.

The current lack of effective monitoring is a serious concern. Although improving nutrition is a national priority, problems with collection of anthropometric data in the 2016 Demographic and Health Survey mean that there are no reliable national estimates of the prevalence of undernutrition since 2013. Reliable information on progress with addressing undernutrition is crucial for incentivizing performance, analyzing the impact of specific initiatives, and improving the efficiency and effectiveness of nutrition programs.

Increasing the frequency, timeliness, and quality of data collection is a key step in ensuring that political leaders, policy makers, service providers and other stakeholders have access to information and can exercise mutual accountability. There may be scope to improve the collection of data by health workers and government staff who monitor food production and food security. However, establishment of a dedicated mechanism for monitoring progress should also be considered. This could take the form of an independent team that is tasked with data collection and analysis to produce an annual nutrition report tracking progress in reducing undernutrition in each of Timor-Leste's 13 municipalities.

More timely information about nutrition outcomes in each municipality would be useful given the significant variation in underlying causes of malnutrition in each municipality (Figure 33). It could also help to leverage the ongoing transfer of responsibility for some services from central government to municipal-level administrations. To fully leverage decentralization, political leaders should continue to emphasize the importance of improving nutrition, communicate a clear expectation that nutrition outcomes will improve, allocate resources for nutrition-related interventions, and encourage service delivery agencies to innovate.

Collaboration between central government agencies, municipal administrations, and development partners could be used to trial new interventions such as enhanced outreach and support to pregnant women and families with young children, nutrition-sensitive agricultural extension services, and conditional cash transfer programs to ensure that mothers have the resources to improve dietary diversity and protein intake.

The government should also work to expand the provision of special energy and micronutrient dense foods for young children aged 6–23 months who are at risk of undernutrition and should consider establishing national food fortification programs to improve the general health of the population. Virtually all households in Timor-Leste use iodized salt and as a result there is almost no problem with iodine deficiency. Fortification of imported rice would be a relatively straightforward way of increasing the consumption of a range of micronutrients including Iron and Vitamin A. Rice fortification could support a reduction in the incidence of anemia in women and children and would be relatively easy to implement at scale when compared to other potential strategies such as distribution of supplements or increased consumption of iron-rich foods.

Figure 33: Prevalence of Nutrition-Related Indicators by Municipality of Timor-Leste (%)

	Exclusive Breastfeeding	Minimum Dietary Diversity	Minimum Feeding Frequency	Birth Weight Recorded	Soap and Water for Handwashing	Contraceptive Prevalence	Households That Are 'Open Defecation Free'
Aileu	86.6	29.2	40.0	62.4	26.2	33.3	98.0
Ainaro	78.2	30.3	50.1	20.4	10.7	17.7	77.0
Baucau	66.0	21.6	66.5	52.3	33.8	24.7	73.0
Bobonaro	72.5	29.8	58.3	56.9	29.6	32.0	94.0
Covalima	80.2	42.7	40.1	62.8	34.9	32.6	61.0
Dili	80.1	49.8	52.3	75.6	38.6	28.6	94.0
Ermera	72.1	18.7	32.9	14.7	35.5	18.5	100.0
Liquica	68.1	12.4	34.3	64.5	23.0	8.2	60.0
Lautem	76.5	23.3	27.1	52.4	23.1	26.0	100.0
Manatuto	77.4	54.8	37.6	58.9	10.1	21.9	43.0
Manufahi	74.1	39.3	51.5	39.3	23.9	35.9	81.0
Oecusse	72.9	29.1	51.0	27.3	25.3	34.8	69.0
Viqueque	65.6	43.0	20.3	55.5	9.7	17.0	75.0

	0%–24%
	24%–49%
	50%–74%
	75%–100%

Sources: Timor-Leste Demographic and Health Survey, 2016; Addressing Stunting in Timor-Leste, Assessment Report.

CONCLUSION

Poor nutrition is a silent emergency that affects almost half of young children in Timor-Leste. At an individual level, undernutrition can lead to a tragic wasting of human potential. At a collective level, the failure to address undernutrition will impose a long-term burden on the country through lower human capital and reduced productivity.

Undernutrition is a complex problem but it can be solved. Doing so will require political will, resources, and a focus on results. With appropriate leadership, Timor-Leste can mobilize resources to accelerate recent improvements in nutrition. It can do this by strengthening basic health services, creating a healthier environment through investments in water and sanitation, increasing the availability and affordability of nutritious foods, and helping households to improve their understanding of hygiene and good nutrition.

Endnotes

¹ Institute for Health Metrics and Evaluation. 2017. *Global Burden of Disease*. Washington, DC.

² Disability adjusted life years are defined as years of healthy life lost and are calculated as the sum of years lost due to premature death and years lived with disability.

³ Timor-Leste Ministry of Health. 2014. *The Economic Consequences of Under-nutrition in Timor-Leste*. Dili.

⁴ Footnote 3.

⁵ Horton, S. and R. Stekel. 2011. Global economic losses attributable to malnutrition 1900–2000 and projections to 2050. Copenhagen.

⁶ Shekar, M., J. Kakietek, J. Dayton Eberwein, and D. Walters. 2017. An Investment Framework for Nutrition: Reaching the Global Targets for Stunting, Anemia, Breastfeeding, and Wasting. Directions in Development Series. Washington, DC: World Bank Group. doi: 10.1596/978-1-4648-1010-7.

⁷ To achieve sufficient dietary diversity, a child should receive foods from 4 or more of the following food groups: a. infant formula, milk other than breast milk, cheese or yogurt or other milk products; b. foods made from grains, roots, and tubers, including porridge and fortified baby food from grains; c. vitamin A-rich fruits and vegetables; d. other fruits and vegetables; e. eggs; f. meat, poultry, fish, and shellfish (and organ meats); g. legumes and nuts.

⁸ Williams, R. and M. Goncalves. 2017. *What are the main drivers of childhood stunting in Timor-Leste?* Dili.

⁹ Footnote 8.

- ¹⁰ Fewtrell, L., R. B. Kaufmann, D. Kay, W. Enanoria, L. Haller, et al. 2005. Water, Sanitation, and Hygiene Interventions to Reduce Diarrhoea in Less Developed Countries: A Systematic Review and Meta-Analysis. *The Lancet Infectious Disease*. 5: 42–52.
- ¹¹ University Research Co. 2018. *Addressing Stunting in Timor-Leste: An Assessment Report*. Maryland.
- ¹² M&E House. 2017. *Timor-Leste Nutrition Strategic Review*. Dili.
- ¹³ Footnote 12.
- ¹⁴ Footnote 11.

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Xie, W. et al. 2018. *Child Growth Predicts Brain Functional Connectivity and Future Cognitive Outcomes in Urban Bangladeshi Children Exposed to Early Adversities*. Boston.

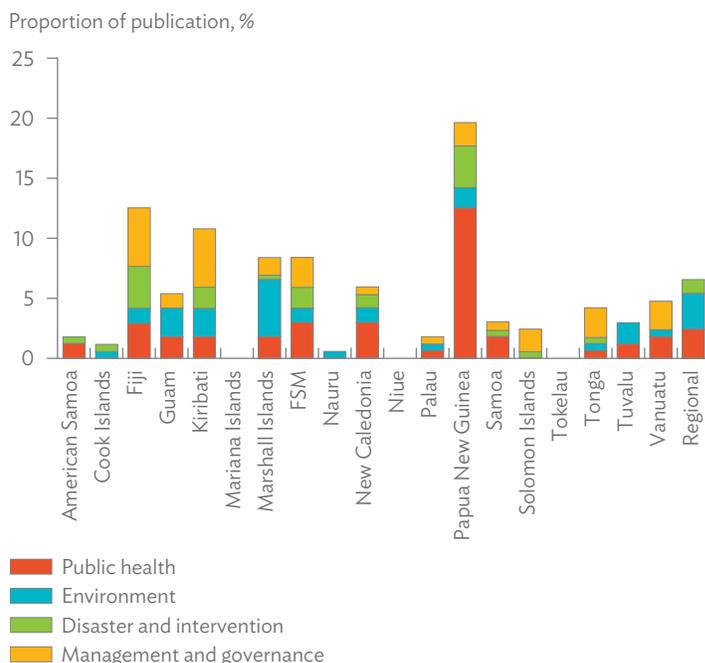
Water and sanitation in the Cook Islands and Kiribati

Lead author: Lily Anne Homasi

Water and sanitation services are basic human rights that are often overlooked worldwide and in the Pacific. On average, governments and even development partners spend less than 5% of their resources to deliver social protection services, including accessibility to water and sanitation (ADB 2018). The United Nations Children’s Fund (UNICEF) and the World Health Organization underscored that more than 1 billion people continue to suffer from limited access to clean water, sanitation, and hygiene services in the Asia and Pacific region. Around 166 million of these people do not have basic drinking water services, and 847 million people do not have safely managed sanitation services (UNICEF 2019).

The Cook Islands and Kiribati are vulnerable to health outbreaks due to poor access to improved water and sanitation. Extreme weather events threaten the quality of limited freshwater resources, while population and cultural factors unique to Pacific island countries present challenges to hygiene and sanitation. Although there is a good proportion of research and publication relating to water and sanitation as shown in Figure 34, there is still a long way for stakeholders to ensure that such knowledge base translates into interventions that will lead to a positive impact on health, environmental, and social outcomes.

Figure 34: Research and Publication on Water and Sanitation in the Pacific



FSM = Federated States of Micronesia.
 Source: *Journal of Water Sanitation and Hygiene for Development*.
<https://www.researchgate.net/journal/20439083>.

The combined area of exclusive economic zones of both the Cook Islands and Kiribati is almost twofold the size of India. While water is one of the few natural resources that these countries have, access to potable water is becoming a major concern. The Cook Islands and Kiribati vouched to improve the situation in their countries by integrating water and sanitation as priorities in their national development plans.

In Kiribati, the sources of water continue to be limited to service a population of around 110,000. While the average rainfall in the country seemingly indicate a potential for significant rainwater harvesting, there is large variability in monthly rainfall and frequent droughts have adverse implications for rainwater storage. Household wells has been an important source of water although dense urban settlements have increased the risk of contamination of these wells. Meanwhile, groundwater is another viable source although its reserves are only expected to last for a few years. The development of new groundwater sources will not just require huge capital investments, but also lengthy and extensive negotiations with landowners and expensive, continuing land rental payments.

On the demand side, population growth in urban areas has resulted in overcrowding that is putting stress on water reserves. For example, around 50,000 people live on South Tarawa, Kiribati's capital, which has a land area of only 16 square kilometers. The continuous migration of I-Kiribati from the outer islands to the capital places heavy pressure on the supply of basic services such as sanitation and water.

Population pressure also contributes to the deterioration of water quality, with serious implications on the health of the people. Waterborne diseases are at all-time highs, with more than 35,000 cases annually reported during 2010–2012, including diarrhea, dysentery, conjunctivitis, rotavirus, giardia, and fungal infections such as ringworm. On average, there are around 350 cases of dysentery and diarrhea for every 1,000 people in South Tarawa every year. Even infants are not spared from waterborne diseases. Between 2010 and 2012, at least 16 deaths per year were attributable to water, sanitation, and hygiene issues. There is also a correlation between the limited water and sanitation services with the student's performance outcomes and mortality rates. UNICEF noted that, every day, over 700 children die from diarrhea linked to unsafe water, sanitation, and hygiene.

Although the proportion of Cook Islanders and I-Kiribati accessing improved drinking water is above 99.3% (2015), in Figure 35, it is unclear if this also pertains to the 24/7 access to good quality water for daily use.

In the Cook Islands, with a population of 19,500 (2017), water and sanitation are not as dire given additional water sources from streams and freshwater. In Rarotonga, the Cook Islands' most populous and biggest island, the demand from the tourism sector for water and sanitation services is the key challenge for local authorities to deliver consistency in water and sanitation services. In 2016–2018, tourist arrivals have risen by an average of nearly 11% per year, from 121,772 in 2014–2015 to 164,800 in 2017–2018. In July 2018 alone, the country hosted 18,332 visitors. This influx of visitors puts enormous strain on the limited wastewater and sanitation services,

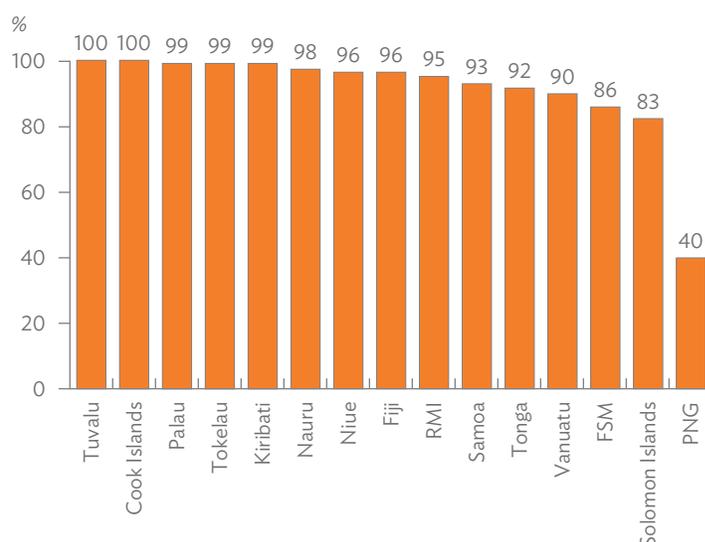
threatening environmental quality, public health, and the overall sustainability of the tourism industry. Avarua, the capital, is prone to heavy rainfall resulting in muddy water and runoff affecting the quality of water accessed by residents and visitors. Additionally, improperly managed sanitation in some areas of Rarotonga has led to environmental contamination.

Prior to 2012, there was no centralized water and sanitation facilities. In line with its Goal 4 Te Kaveinga target, the Government of the Cook Islands coordinated with development partners to embark on the largest project ever delivered in the Cook Islands to improve the reticulated water system. The investment was spearheaded via the Te Mato Vai Project, replacing the old infrastructure to improve the distribution of the piped network, consisting of one ring main circumnavigating the entire island, and a series of cross mains and submains connecting water users. The reticulated network supplies residential homes, commercial and industrial sectors, and major public institutions on Rarotonga. Also under development is the Mei Te Vai Ki Te Vai Project, a central reticulated sanitation system to replace a distributed system of septic tanks and isolated on-site wastewater treatment systems.

Figure 36 demonstrates that majority of the population in the Cook Islands accessed improved sanitation. However, Kiribati's accessibility of these sanitation services is lower than the Organisation for Economic Co-operation and Development average of 98.3% in 2015.

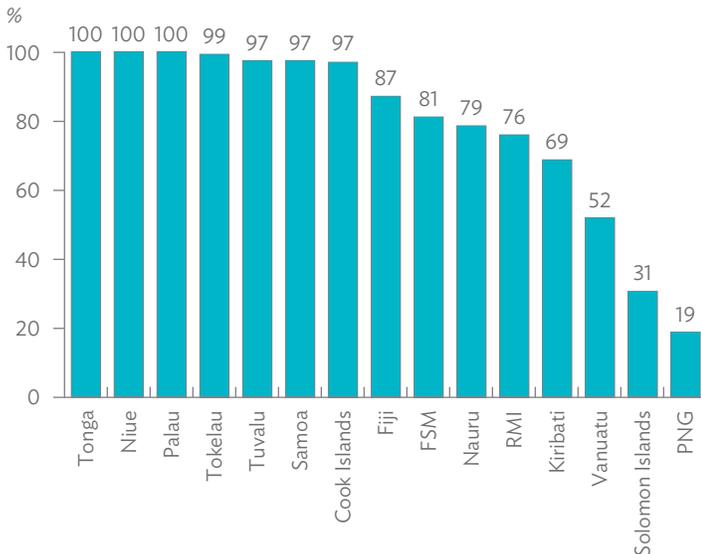
Looking ahead, given the critical state of the quality and quantity of potable water in the Cook Islands and Kiribati, it is important to develop new and sustainable sources to cater to the growing demand. One possible option is to use seawater and make it potable by removing salt and other contaminants through seawater reverse osmosis desalination.

Figure 35: Proportion of Population Accessing Safe Drinking Water by Country/Territory, 2015



FSM = Federated States of Micronesia, PNG = Papua New Guinea, RMI = Republic of the Marshall Islands.

Source: Secretariat of the Pacific Community, National Minimum Development Indicators. http://www.spc.int/nmdi/environmental_health.

Figure 36: Proportion of Population with Access to Improved Sanitation by Country/Territory, 2015

FSM = Federated States of Micronesia, PNG = Papua New Guinea, RMI = Republic of the Marshall Islands.

Source: Secretariat of the Pacific Community, National Minimum Development Indicators. http://www.spc.int/nmdi/environmental_health.

Desalination has been used in the Pacific islands since the 1990s, though most plants have been small-scale. Most of the desalination plants in the Pacific are cumbersome to operate, difficult to maintain, and have very limited life spans, making desalination a costly venture. Operation of these plants also require electricity. With power systems in the region traditionally relying on imported fossil fuels, production of potable water can be expensive also.

For Kiribati, development partners have joined together to support the government in constructing the largest desalination plant in the Pacific. Aside from the new desalination plant, a solar photovoltaic plant will also be constructed to provide the energy requirements. The desalination plant will have an initial capacity of 4,000 cubic meters per day and is expected to be completed around 2022.

Ensuring water, sanitation, and hygiene (WASH) systems in schools is critical as they contribute to successful education by promoting good health and supporting school attendance. Girl students and students with disability face significant challenges when there are inadequate WASH systems.

Findings from the Journal of Water, Sanitation and Hygiene for Development indicate a knowledge gap in evidence-guided WASH management strategies that advocate for environmental health, while concurrently protecting and preserving drinking water resources. This is a useful area to explore further to improve the delivery of water and sanitation services in the Cook Islands and Kiribati.

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Generic links

http://www.spc.int/nmdi/environmental_health

https://www.researchgate.net/journal/2043-9083_Journal_of_Water_Sanitation_and_Hygiene_for_Development

<https://www.unicef.org/eap/press-releases/1-3-people-globally-do-not-have-access-safe-drinking-water-unicef-who>

<https://www.unicef.org/reports/progress-on-drinking-water-sanitation-and-hygiene-2019>

http://www.wpro.who.int/southpacific/pic_meeting/2017/documents/12thphmm_session01himf_annex2_24aug_comp.pdf

<https://iwaponline.com/washdev/article/8/3/386/41301/Water-sanitation-and-hygiene-systems-in-Pacific>

Kiribati

Kiribati 20-Year Vision 2016–2036

Kiribati Development Plan

South Tarawa Water and Sanitation Roadmap 2011–2030

Tarawa Water Master Plan: 2010–2030.

<https://www.livablecities.info/kiribati-desalination-plant>

Cook Islands

Cook Islands Te Kaveinga – National Development Plan 2015–2020

Cook Islands: Global Analysis and Assessment of Sanitation and Drinking Water

<http://www.ici.gov.ck/water>

<http://www.ici.gov.ck/the-water-network>

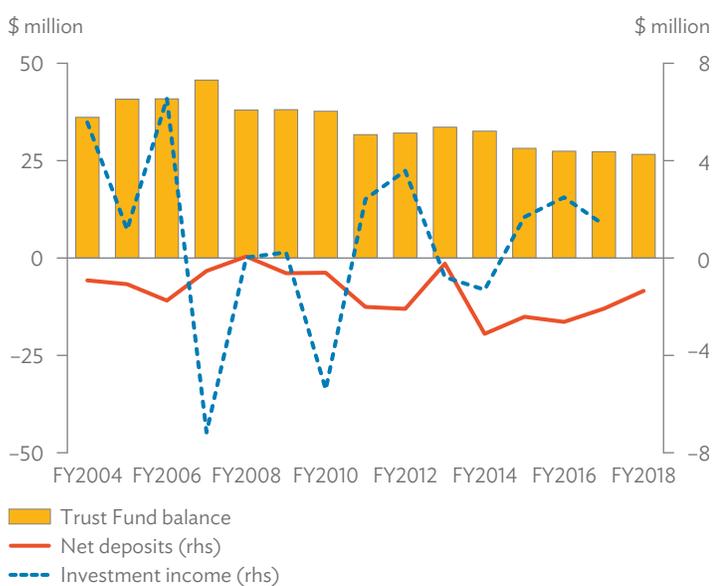
<https://www.totatouvai.co/te-mato-vai-1>

Palau: Reforming the Civil Service Pension Plan

Lead author: Rommel Rabanal

The Civil Service Pension Plan (CSPP) is a social security fund that covers public sector officials and employees in Palau. Historically, the CSPP has been underfunded (i.e. contributions have been insufficient to cover future payouts) and the situation was aggravated by the global economic crisis. There has been some recovery in investment returns since 2008 but contingent liabilities related to the CSPP continue to pose a major fiscal risk (Figure 37). The latest audit results show a net pension liability of \$259.4 million (equivalent to 91% of GDP), nearly 10 times the size of fund assets, as of end-FY2018 (ended 30 September 2018). Further, the audit reveals that based on projected payouts the CSPP will be fully depleted as early as FY2022, absent robust reforms to promote sustainability. This would pose an additional burden of about \$6 million annually on the national government.

Figure 37: Palau Civil Service Pension Plan Trust Fund Trends



FY = fiscal year, rhs = right-hand scale.

Source: Graduate School USA. 2019. *Republic of Palau Fiscal Year 2018 Statistical Appendices (Preliminary)*. March.

The government has implemented several stopgap measures aimed at improving the CSPP's position. First, mandatory retirement after 30 years in public service has been removed. Second, half of the \$50 increase in departure taxes (Pristine Palau Environmental Fee) implemented as part of the marine sanctuary bill passed in 2015, has been earmarked for direct transfers to the CSPP. Third, a 4% tax is now being levied on remittances of foreign workers with the proceeds being set aside to subsidize the CSPP. In total, transfers to the CSPP amounted to \$1.1 million (\$0.7 million from the share in departure taxes and \$0.4 million from remittance taxes) in FY2018. Despite these measures the financial position of the CSPP has continued to deteriorate. Relative to the previous year, net pension liability increased further by \$9 million and the trust fund's balance still fell by \$0.7 million in FY2018, stressing the need for further reforms.

CSPP developed a funding plan in April 2017 that proposed both to increase contribution rates and effectively reduce benefits. However, the President deferred approval of these changes and the government instead has commissioned an Actuarial Study to come up with recommendations for more comprehensive reform. Initial recommendations of the Actuarial Study include

- an increase in the normal retirement age by 1 year every 5 years until the retirement age reaches 65 years;
- no change in current benefits to active employees and inactive members aged 55 years and over;
- benefit formula to remain at 2% for each year of service, but a new defined contribution scheme will be introduced to provide half of the benefits, with the other half from the current defined benefit plan;
- contributions of public sector employers and employees to be split between the new defined contribution scheme (3% each) and the existing defined benefit plan; and
- defined contribution scheme to be opened to private sector employers and employees.

This initial list of reforms appears to be a promising start toward steering the CSPP to a more sustainable footing. It also avoids a sharp increase in contribution rates along with sudden cuts in benefits, the combination of which is likely to be politically untenable. In view of the impending deadline in FY2022, it is crucial to finalize and implement the reform plans immediately to save the CSPP in order to limit any future fiscal burden.

Financial inclusion in Nauru, Tonga, and Tuvalu

Lead authors: Noel Del Castillo and Jacqueline Connell

Like in most Pacific DMCs, many households in Nauru, Tonga, and Tuvalu lack access to formal financial services. Financial institutions often do not extend their services because of perceived high risks and inability of lower-income or subsistence households to provide viable collateral for their loans. Across the Pacific, this is exacerbated by an underdeveloped finance sector and the geographical layout of most DMCs. As such, providing opportunity for lower-income households to have affordable access to basic financial services is an important component of addressing hardship and vulnerability, as well as the broader economic development of a country. Although the cases of these countries reflect the continuous pursuit of most Pacific DMCs to achieve higher levels of financial inclusion, the contrast among these countries also reflects the varying degrees of financial inclusion across the Pacific.

NAURU

As a single, 21-square kilometer island nation, Nauru does not face the challenge that other Pacific island nations do in extending access to financial services and ATMs across a widely dispersed population. Instead Nauru faces challenges in extending the range of available financial services, and improving its finance sector regulation, given its small population and limited domestic institutional capacity.

The establishment of the Bendigo bank agency in 2015, which is part of the Bendigo and Adelaide Bank Limited of Australia, has promoted financial inclusion. Prior to that, the people of Nauru did not have access to a formal banking service on island for more than 15 years following the collapse of the state-owned Bank of Nauru. During this period, the economy was mostly cash-based, and Nauruans had limited avenues to save surplus income for the future.

There has been rapid take-up of new bank accounts since the Bendigo bank agency was established, including accounts where local workers receive their wages. However, Nauru's prolonged period without a functioning bank means that many people have limited experience with banking services and financial literacy is generally low. The government is working with development partners to introduce a program promoting financial literacy in schools and the community.

While the Bendigo bank agency provides ATM access, checking, savings, and time deposits, it currently does not extend loans or credit card services. Other financial service providers in Nauru are limited and include a Western Union money transfer agent.

The construction of an undersea telecommunication cable, which is being supported by development partners, will provide more reliable and cheaper internet in Nauru and present opportunities for digital finance. The Bendigo bank agency is interested in expanding electronic payments, for example, provided the telecommunication network becomes more reliable. However, to maximize the potential benefits of digital finance, and to support a broader range of financial services, the government will also need to develop an appropriate legal and regulatory framework and supervisory capacity that is cost-efficient and tailored to the small island context.

TONGA

Tonga's financial system is composed of the central bank, the National Reserve Bank of Tonga (NRBT), which is responsible for the licensing and supervision of financial institutions: four commercial banks, two retirement funds, several money transfer dealers, and some informal moneylenders. Two of the commercial banks—Australia and New Zealand Banking Group Limited and Bank South Pacific—are branches of international banks, while the other two—MBF Bank and the Tonga Development Bank—are locally incorporated. Although Australia and New Zealand Banking Group Limited, Bank South Pacific, and MBF Bank are private banks, the Tonga Development Bank is a publicly owned bank with the Government of Tonga holding 90% of the shares.

With financial stability an important component of a growing economy, the Government of Tonga is looking to ensure that NRBT maintains its regulatory and supervisory capabilities, and that the legal framework is appropriate to support an efficient financial system.

Financial access in Tonga is high compared with some other Pacific island economies. Tonga has the highest number of commercial bank branches per 100,000 adults and the fifth-highest number of ATMs per 100,000 adults (Figure 38). Like many Pacific DMCs, Tonga's economy is mostly driven by the public sector. Most government employees have a bank account, but many in the private and informal sectors remain excluded or have access only to informal financial services. This partly explains the low level of formal account ownership in Tonga with only 48% of its adult population having an account in a financial institution. However, account ownership is close to the average level of lower middle-income countries, despite being classified as an upper middle-income country. Meanwhile, mobile money transactions are increasing over time, providing another opportunity to expand access to formal financial services.

Figure 38: Financial Access Across Selected Pacific Developing Member Countries
(number of ATMs and branches of commercial banks per 100,000 adults)



FSM = Federated States of Micronesia, PNG = Papua New Guinea.

Notes: 2013 data for Kiribati; 2015 for Vanuatu; 2016 for Marshall Islands and Tuvalu; 2017 for remaining countries. No data on branches of commercial banks for Palau and Tuvalu.

Sources: International Monetary Fund Article IV Consultation Reports for Nauru, Tonga, and Tuvalu, various years, and Financial Access Survey 2018.

The government is taking steps to broaden access to finance in Tonga. The International Monetary Fund (IMF) (2016a) noted that the NRBT is currently implementing a project to finance small and medium-sized enterprises, as well as conducting a survey to study determinants of credit demand across the country. Reforms to credit reporting and credit bureau coverage can help reduce the cost of conducting due diligence, which can expand access to finance. The IMF (2016a) also observed that revisions to Tonga's Land Act would allow more people access to formal finance, if land can be used as collateral for loans.

TUVALU

The finance sector of Tuvalu consists of two publicly owned banks (the National Bank of Tuvalu and the Development Bank of Tuvalu), a provident fund (Tuvalu National Provident Fund), a money transfer company, and a handful of small and informal moneylenders. The National Bank of Tuvalu, which has 90% of total banking sector assets, focuses on lending to the household sector, including home loans, while the Development Bank of Tuvalu supports public and private enterprises. The Tuvalu National Provident Fund invests in social security contributions and extends credit to its members.

Unlike in Tonga and similar to Nauru, there is no independent regulator of the finance sector in Tuvalu, and the amendment of the Banking Commission Act of 2011 effectively gave the minister of finance the supervisory and regulatory powers.

Tuvaluans have weak financial access. The number of depositors is limited, and Tuvaluans have no access to ATMs and credit card services. High credit risk and weak credit culture urged financial institutions to adopt a conservative approach in their lending business. Financial institutions have limited a borrower's debt-to-income ratio to below 40% since 2012. In most cases, the borrower's pension contributions serve as loan collateral, while for consumer loans, payment obligations are deducted directly from the borrower's salary. As formal financial institutions play a vital role in the development of an economy, its weakness hinders private sector development and financial inclusion.

Financial supervision is crucial in Tuvalu to develop its finance sector and improve financial inclusion. Tuvaluans have access to limited financial services, with only two government-owned banks operating in the country. Unlike other Pacific island economies, Tuvalu lacks the presence of a foreign-owned bank, although the IMF (2016b) observed that the government has expressed interest in cooperating with a foreign-owned institution to offer international banking services, including access to ATMs. Aside from having limited banking options, residents of Tuvalu have difficulty accessing credit due to a lack of effective collateral (largely because of issues in landownership) and low levels of financial literacy. The IMF (2016b) stressed that the country's provident fund can play an important role in ramping up access to financial services, particularly with respect to providing credit and intensifying financial education. Finally, the government also can explore mobile banking, which has proven to be effective in promoting financial inclusion elsewhere in the Pacific, to take advantage of its people's high rate of internet usage and mobile cellular subscriptions.

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POLICY BRIEFS

This article summarizes the analysis and findings of the 2019 ADB publication “The Social Protection Indicator for the Pacific: Assessing Progress,” prepared by ADB’s Sustainable Development and Climate Change Department.

Social protection in the Pacific

Traditionally, Pacific societies take care of the disadvantaged and vulnerable through the efforts of family and the immediate community. These kinship systems have provided an informal type of social protection in the islands and fostered a belief among many Pacific cultures that extreme poverty and hardship could not, and should not, exist. As a result, formal social protection systems are generally weakly developed in the Pacific island countries.

Today, however, traditional social protection systems are coming under stress from a wide range of social and economic developments, both internal and external. These include out-migration from rural areas to urban centers as well as overseas, which means that many are living with minimal close family around them. The perceived need for cash in day-to-day life is increasing, be this for education or health costs, transport, or communication services. Yet slow and volatile economic growth rates mean that large numbers of youth are having trouble finding work as they enter the labor force, and these job seekers are congregating in urban centers. An increase in the incidence of noncommunicable or “lifestyle” diseases—including record incidence of diabetes and even resurgence of tuberculosis in some countries—is putting additional pressure on both existing health services and traditional careers.

In the Pacific, the disadvantaged and vulnerable are increasingly reaching outside their traditional family and community social safety nets to seek assistance from the government and nongovernment organizations. There are pressures on the nascent social welfare systems in place and the need for a better understanding of the options available to provide the support required to meet the needs of the vulnerable.

This policy brief brings attention to the ongoing work of the Asian Development Bank (ADB) on the Social Protection Indicator (SPI), which assesses the social protection systems of 13 Pacific developing member countries (DMCs). The current focus relates to ADB’s Strategy 2030’s continuing emphasis on social protection, not only in the context of its first operational priority of addressing remaining poverty and reducing inequality, but also through a differentiated approach to (low and) lower middle-income countries (which includes six Pacific DMCs).¹ Also, the forthcoming update to the Pacific Approach—ADB’s operational strategy for the 12 smallest Pacific DMCs—will be informed by results from this important stream of work to further strengthen social protection systems in the subregion. This brief proceeds as follows: (i) the concept of the SPI is outlined, (ii) broad findings are shared, and (iii) the steps to strengthen social protection systems in each country are set forth as a starting point for policy dialogue.

Social protection and the Social Protection Indicator

Social protection refers to a set of policies and programs that are designed to reduce poverty and vulnerability by promoting efficient labor markets, diminishing people’s exposure to risks, and enhancing their capacity to protect themselves against hazards and interruption or loss of income. These policies and programs can be divided into three major components:

- **Social insurance** uses contributory schemes to help people respond to common risks, such as illness, old age, and unemployment. Its major components are health insurance, pension, and unemployment insurance.
- **Social assistance** provides unrequited transfers to groups, such as the poor, who cannot qualify for insurance or would receive inadequate benefits from such a source. The major components of social assistance are cash or in-kind transfers, child welfare, assistance to the elderly, health assistance, disability benefits, and disaster relief.
- **Labor market programs** help people to secure employment. Their major components are skill development and training programs, and special work programs, such as cash- or food-for-work programs.

The SPI can be used to highlight the relative importance of these three major social protection programs. It is a ratio based first on dividing total expenditures on social protection by the total potential beneficiaries. This ratio is then expressed as a percentage of gross domestic product (GDP) per capita.

While a number of established indicators exist for assessing social protection, the SPI offers additional value by highlighting several aspects of social protection in more detail. First, the SPI provides a combined benchmark for social protection “magnitude” (in terms of how much money is spent) and “inclusiveness” (in terms of how many potential beneficiaries are reached). Second, the SPI allows assessment of social protection as a “system” by looking at social protection programs as a whole, rather than focusing on distinct programs. At the country level, it can be used to assess social protection systems in terms of the relative significance of their different components, as well as progress over time. At the cross-country level, it enables comparisons to be drawn between social protection components (and their subcomponents) and progress over time. Finally, the SPI can also be used to assess the depth and breadth of each of the social protection programs and their distributional impact on the poor and the nonpoor, and on women and men. This allows a deeper analysis of the SPI results, including an assessment of the value of average benefits of each actual beneficiary.

General results

The average SPI for the Pacific in 2015 has risen to 5.3% of GDP per capita. This is a marked improvement from its average SPI figure in 2012 (1.9%), which was then much lower compared with the average SPI for Asian countries (3.7%). The highest SPI in the Pacific was for Timor-Leste at 12.6% followed by the Marshall Islands at 10.6%, while Papua New Guinea (PNG) had one of the lowest SPI of any country in Asia and the Pacific region (0.8%) (Figure 1).

The diversity in social protection programs among Pacific DMCs is illustrated by variations within income groups. Among the upper middle- to high-income countries, the Marshall Islands and Palau stand out as having much higher SPIs than the other five countries in the group (the Cook Islands, Fiji, Nauru, Samoa, and Tonga). Of the lower middle-income group, Timor-Leste and Kiribati have SPIs more than three times the average of its peers (the Federated States of Micronesia, PNG, Solomon Islands, and Vanuatu).

Social protection components

As seen in Asia, social insurance is likewise the dominant component of social protection expenditures across most of the Pacific. The SPI for social insurance in the Pacific region was 3.0% of GDP per capita—accounting for more than half of the overall 2015 SPI—while the SPI for social assistance was 1.9% and for labor market programs was 0.5% (Figure 2).

However, the relatively high share of expenditures on social insurance has not necessarily translated into a correspondingly wide reach of beneficiaries. While social insurance programs accounted for 61.6%, on average, of social protection expenditures in the Pacific, these programs only covered 9.7% of actual social protection beneficiaries. Conversely, social assistance accounted for 34.2% of social protection expenditures, but reached more than three fourths (79.0%) of total beneficiaries. Active labor market programs accounted for just 4.2% of expenditures, but yielded 11.3% of social protection beneficiaries.

Within social insurance, the dominant subcomponent was pension and retirement benefits, accounting for 54.7% of social protection expenditures, but only reached 8.0% of social protection beneficiaries. Health insurance accounted for just 0.8% of expenditures and 1.1% of actual beneficiaries.

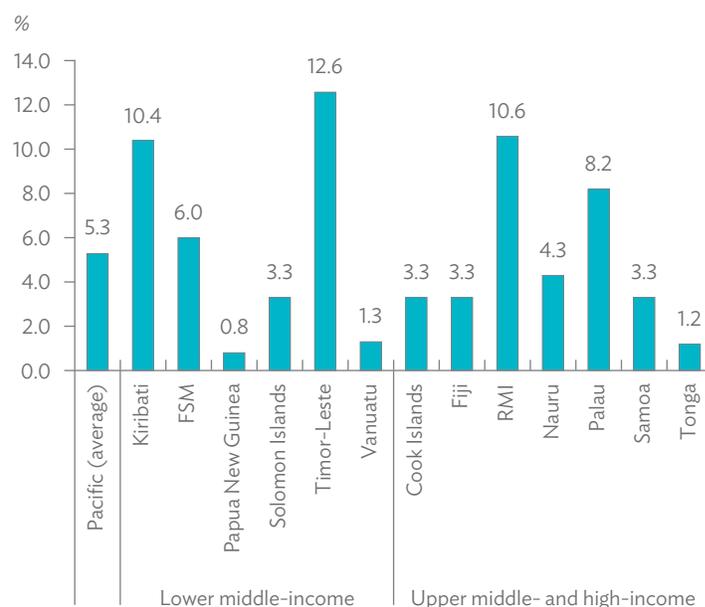
The main subcomponent of social assistance was assistance for older people, followed by child welfare programs, health assistance, and disability assistance. “Social transfers,” which consisted of a wide range of smaller, often country-specific programs, made up the rest of this category.

Labor market programs consist of cash- or food-for-work schemes plus skills development training initiatives.

Depth and breadth of social protection

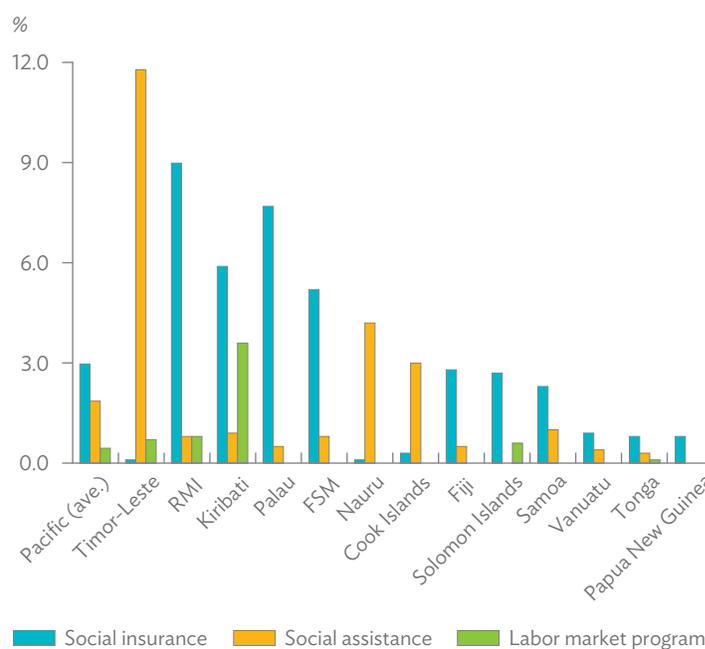
Depth of benefits represents the average expenditure per actual beneficiary (as % of GDP per capita), while breadth of coverage indicates the proportion of the potential beneficiaries who actually receive social protection benefits.

Figure 1: Social Protection Indicator, 2015
(% of GDP per capita)



FSM = Federated States of Micronesia, GDP = gross domestic product, RMI = Republic of the Marshall Islands.
Source: ADB. 2019. *The Social Protection Indicator for the Pacific: Assessing Progress*. Manila.

Figure 2: Social Protection Indicator by Component, 2015
(% of GDP per capita)



ave. = average, FSM = Federated States of Micronesia, GDP = gross domestic product, RMI = Republic of the Marshall Islands.
Source: ADB. 2019. *The Social Protection Indicator for the Pacific: Assessing Progress*. Manila.

The average depth of benefits in the Pacific in 2015 was 54.1% (Figure 3). Depth is driven by social insurance, which usually offers relatively large benefits to a small group of formally employed individuals. However, the average breadth of social protection coverage in the Pacific was lower at 31.2% of potential beneficiaries.

Many Pacific DMCs registered high depth indicators because of national provident funds that provide retirement benefits to individuals who have been in formal employment. Such funds tend to involve generous benefits packages, such that even some countries with low levels of GDP per capita and relatively low SPIs (e.g., Kiribati, PNG, and Solomon Islands) also recorded high depth indicators.

High breadth of coverage is more likely to be associated with a higher SPI. Palau and Timor-Leste exhibited two of the three highest breadths of social protection coverage scores in the Pacific, and both also rank among the top five highest SPIs. Although Timor-Leste ranked last among Pacific DMCs in GDP per capita (excluding oil revenues), the country has been successful in expanding its social protection coverage, primarily through its expansive school feeding program, assistance to older people, and pensions to war veterans.

Poverty impact

Critically, social protection programs in Pacific DMCs are not reaching those most in need of support. Data indicate that the nonpoor have much greater access to all forms of social protection than the poor. The overall 2015 SPI for the nonpoor in the Pacific was 3.9%, while for the poor it was a low 1.4% (Figure 4). Even when programs do reach the poor, the benefits available (as indicated by the depth of social protection, particularly the social assistance component) are very small.

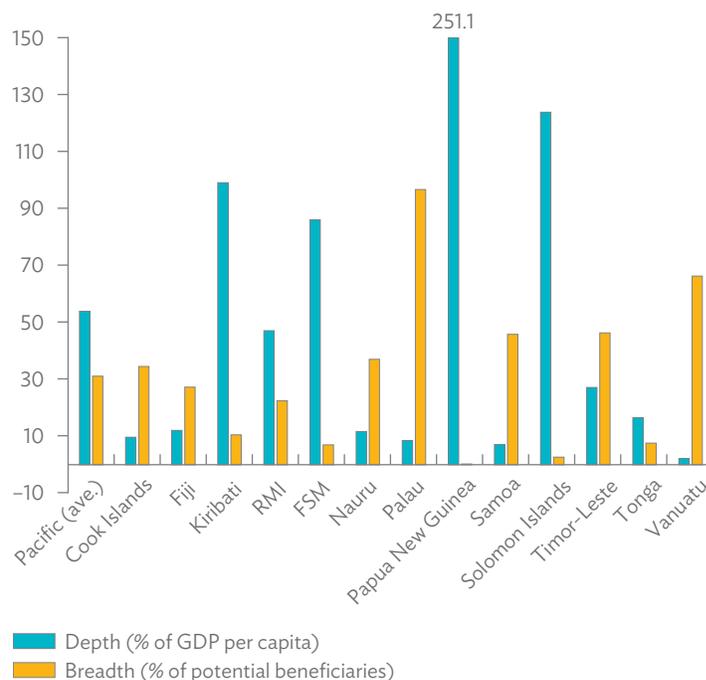
Social insurance appears to be biased toward the nonpoor as the poor are less likely to be in formal employment. Social insurance schemes are essentially long-term contributory savings schemes. The beneficiary gets back in the form of benefits what has been saved from their earnings, plus matching employer contributions. It is generally only the nonpoor who are able to contribute to these schemes. Although some “working poor”² may benefit from social insurance schemes, the majority is left out.

Even for the social assistance component, previous analyses based on 2012 data showed that the SPI for the nonpoor exceeded that for the poor. This implies that, rather paradoxically, social assistance benefits are unlikely to have much impact on the poor. Support for labor market programs was very small in general that it was difficult to compare support for the poor with support for the nonpoor under this component.

Gender impact

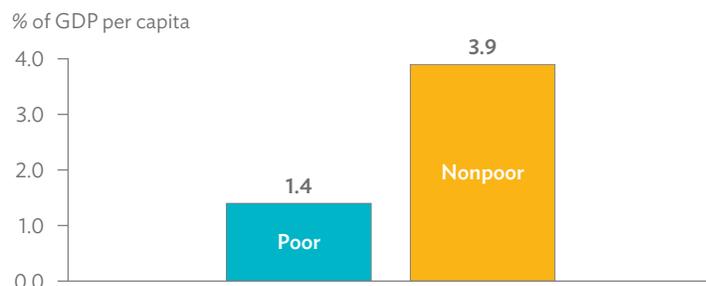
The gender dimension of the SPI suggests that men benefit more from social protection than women. The disaggregated SPI for men in the Pacific region was 3.3%, while that for women was 2.0% (Figure 5).

Figure 3: Pacific Depth and Breadth of Social Protection Indicator, 2015



ave. = average, FSM = Federated States of Micronesia, GDP = gross domestic product, RMI = Republic of the Marshall Islands.
Source: ADB. 2019. *The Social Protection Indicator for the Pacific: Assessing Progress*. Manila.

Figure 4: Pacific Social Protection Indicator by Poverty Status, 2015



GDP = gross domestic product.
Source: ADB. 2019. *The Social Protection Indicator for the Pacific: Assessing Progress*. Manila.

Figure 5: Pacific Social Protection Indicator by Gender, 2015



GDP = gross domestic product.
Source: ADB. 2019. *The Social Protection Indicator for the Pacific: Assessing Progress*. Manila.

Women benefit less from social insurance than from social assistance, largely owing to their lack of access to formal sector employment. According to World Development Indicators online, males are more likely to be employed than females in all Pacific DMCs. Only in PNG was the gap narrow, with the male participation rate at about 63% and the female rate at 60%. This is because women play a significant role in agriculture in rural PNG. Based on previous analyses using 2012 data, the gender gap was widest for the social insurance component, but women's SPI for social assistance was about the same as for men. Labor market programs are very small and has little effect on overall gender impacts across all forms of social protection.

Progress in social protection

Comparing SPI data from 2012 against the 2015 update shows that most of the Pacific DMCs made significant progress in improving their social protection programs. This was after no progress was recorded during 2009–2012, as many Pacific DMCs experienced low rates of economic growth due to lingering impacts of the global economic crisis. Consequently, national budgets of some countries came under pressure as revenues stagnated or, in some cases, declined. In turn this increased the need to streamline budget expenditures and led to more reliance on budgetary support from development partners.

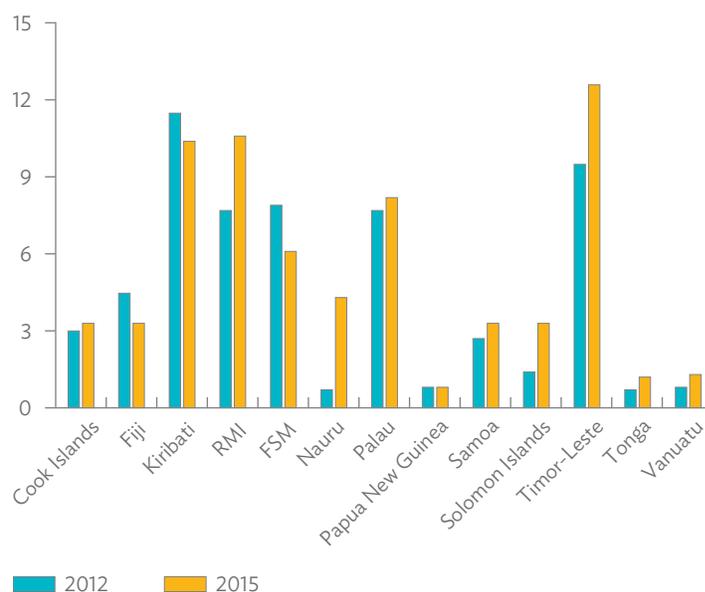
Since then, however, renewed efforts to strengthen social protection has seen the average SPI improve from 1.9% in 2012 to 5.3% in 2015 (Figure 6). Among the recent success stories include the strengthening of the average SPI across each component: social insurance from 1.2% to 3.0%, social assistance from 0.6% to 1.9%, and labor market programs from 0.1% to 0.5.

Recommendations

Despite progress in recent years, social protection programs in the Pacific remain relatively underdeveloped. Coverage is narrow; benefits often fail to reach the poor and the vulnerable. In almost all countries, social protection is centered on social insurance programs provided through contributory insurance schemes that primarily target and benefit those in formal employment. Broader social assistance programs that specifically target the poor and vulnerable are underdeveloped.

While social protection expenditure in the Pacific is increasing, more is needed from Pacific governments to continue strengthening social protection policies and programs. Higher expenditure must also consider the need to broaden social protection coverage, which can provide more support to vulnerable groups such as the poor, children, and women. They may also consider developing a comprehensive and coordinated social policy to strengthen social protection systems in the region. An increasing number of ad hoc and uncoordinated social protection measures across the region has given rise to inconsistencies in targeting beneficiaries and in the levels of benefits provided. Greater policy coordination would help ensure that increasing levels of social protection expenditure benefit the poor, women, and the vulnerable.

Figure 6: Social Protection Indicator, 2012 versus 2015
(% of GDP per capita)



FSM = Federated States of Micronesia, GDP = gross domestic product, RMI = Republic of the Marshall Islands.
Source: ADB. 2019. *The Social Protection Indicator for the Pacific: Assessing Progress*. Manila.

Lead authors: Noel Del Castillo and Rommel Rabanal

Endnotes

- 1 ADB. 2018. *Strategy 2030: Achieving a Prosperous, Inclusive, Resilient, and Sustainable Asia and the Pacific*. Manila.
- 2 These are the people who are employed, but whose average family income is still below the national basic-needs poverty line.

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This policy brief summarizes relevant discussions during the 10th International Ageing Asia Innovation Forum 2019, held in Singapore on 14–15 May 2019.

Aging and care for older persons: Recent developments and implications for the Pacific

As of 2017, an estimated 962 million people—13% of the world population—were aged 60 or over, according to the United Nations Population Fund (UNFPA), and the number of older persons is growing at a rate of about 3% per year. In Asia and the Pacific alone, the number of older persons is seen to triple to 1.3 billion by 2050, with women constituting the majority. Hence, coping with an aging population has become one of the most important social issues globally, with implications for labor, financial markets, social protection, and family relations, among others. This policy brief discusses global trends in care for older persons and their possible applications to Pacific communities.

Aging in the Pacific

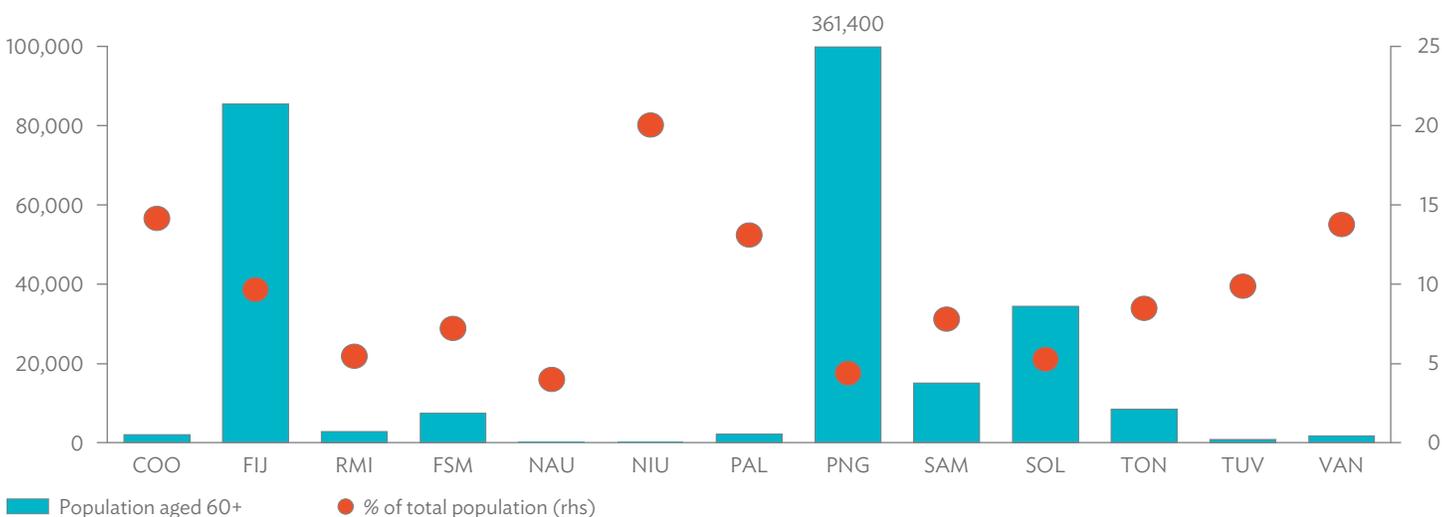
Although the youth (i.e., aged 10–24) still represents the largest age group in the Pacific, the number and proportion of older persons are rising. The total number of persons aged 60 years and older in the Pacific was approximately 512,000 in 2014 and, by 2030, this number is projected to reach 1 million before doubling again by 2050. At a country level, older populations are seen to quadruple in Nauru, Papua New Guinea, Solomon Islands, and Vanuatu between 2015 and 2050. Based on estimates by the Secretariat of the Pacific Community, Niue has the highest proportion of older persons in the population in the Pacific at 20%, followed by the Cook Islands, Vanuatu, and Palau at more than 10% as of 2016 (Figure 7).

Family-based care at home is the traditional form of support for care for older persons in the Pacific, particularly in cases where older people live with multiple noncommunicable diseases (NCDs) rather than infectious diseases, and decline in functional capacity. However, in cases where specialized assistance is required, such as for persons requiring 24-hour attention by persons with appropriate training, home care becomes less than suitable. Further, emigration, smaller family sizes, rising female labor force participation, and rapid urbanization are undermining traditional family and community support in the Pacific, resulting in a less-reliable system for home-based care. Therefore, developing a balanced long-term care system with complementary models of support, along with technological innovations, is becoming essential to supplement home-based care.

New models for care for older persons

Supporting “aging in place” is increasingly becoming an important objective in long-term care services, with a focus on enabling persons to remain in their homes and communities as they wish. This requires developing home- and community-based care services, such as personal care services to assist older people in their homes, management of their daily activities such as bathing and eating; home nursing; and community care services, such as specialist clinics, day care services, community groups, and so forth.

Figure 7: Population of Older Persons in the Pacific, 2016



COO = Cook Islands, FIJ = Fiji, FSM = Federated States of Micronesia, NAU = Nauru, NIU = Niue, PAL = Palau, PNG = Papua New Guinea, rhs = right hand scale, RMI = Republic of the Marshall Islands, SAM = Samoa, SOL = Solomon Islands, TON = Tonga, TUV = Tuvalu, VAN = Vanuatu.
Source: Secretariat of the Pacific Community.

A greater emphasis is now being placed on building on the “assets” of individuals, and the things that they can be supported to do themselves, rather than just being passive recipients of care services, which has led to a focus on home modifications, provision of assisted devices, re-enablement programs, and socialization activities. Community-based models also have an important objective of developing more affordable access to older persons care services.

Where persons either prefer or are no longer able to be supported safely at home, moving to a residential facility is considered. There is a current focus on moving away from institutional (like residential and nursing homes) to creation of a community-like atmosphere, particularly in advanced economies. This allows the residents to stay in a familiar environment while receiving the necessary care. Some notable models include:

- **Group home model.** From traditional big nursing homes to group homes that provide a more family-like environment, employing a more socialized versus clinical approach to older persons care. In Australia, these are homes with 6–10 senior residents located in local communities with care ratios of 1:3. Usually for people with dementia or similar circumstances and located in local communities, this model facilitates the involvement of entire communities for more inclusive support (Box 1). The group home employs care workers who are supplemented by daily visits from a registered nurse.
- **Independent living and care model.** Applicable to older persons who are still able to live independently, this model integrates access to health management and services into property development, and emphasizes deferring of early and gradual decline of mental and physical health. In the case of Hong Kong, China, rental housing estates for older persons include home safety services (including assessments of home safety for older persons) as well as care and support for health and wellness (e.g., regular health checks, medicine use support teams, and mutual support networks). Future development and redevelopment of real estate also consider integrating not only residential home care but also day care centers, clinics, and other health and wellness facilities to serve both the tenants and the local community.
- **Continuing care retirement community.** A model where all types of living options—independent living, assisted living, memory care, and nursing home—is made available in a community, and residents move as their circumstances change. Examples of this type of retirement community from the People’s Republic of China as well as in the United States emphasize the importance of promoting older persons health by maintaining an active lifestyle and continuous engagement with the community.
- **Intergenerational care model.** Involves integrated care for all age groups to help build a shared responsibility within the community. For example, outdoor playgrounds for all ages are built to facilitate interaction and activities between children and older persons. This helps create an extended family environment that reduces feelings of isolation common among older people. Some countries have also co-located child care and long-term care facilities with common spaces for joint activities.

Box 1: Addressing the Challenges Posed by Dementia

Globally, around 50 million people have dementia, of which 22.9 million are in Asia and the Pacific. One of the key priority areas of the World Health Organization’s Global Dementia Action Plan is building dementia-friendly communities (DFCs). These communities aim to help transform people’s perception of dementia by reducing the stigma, promoting awareness, and empowering people living with dementia. Among the key steps involved in the implementation of DFCs are forming focus groups to discover whether a community is dementia-friendly; establishing priority issues and resources available to address these; and forming local alliances with business, local, government, service providers, and medical and care staff. Examples of DFCs include dementia-friendly cafes (in Argentina and Singapore); dementia-friendly churches (in Taipei, China); dementia-friendly malls, and even cities (in Costa Rica and Guatemala). In 2019, Japan instituted a new national program on “dementia coexistence and prevention.”

Some examples of innovation in caring for people with dementia include (i) providing “dementia supporter” certifications through education and training to support people with dementia (e.g., over 10 million people in Japan already have this certification); (ii) forming dementia working groups (or even dementia villages), and caring for dementia not as supporter but as a partner; (iii) finding ways for people with dementia to be a social resource rather than a burden by creating an environment in which they can be engaged (e.g., small-scale multifunctional campus); (iv) using virtual reality or computer technology to create a simulated environment to help stimulate memory and learning; and (v) gamifying to encourage a fun way to exercise. All of these innovations aim to create a more dementia-friendly society by overcoming stigma, increasing understanding, and providing opportunities for persons with dementia to continue to live meaningful lives.

Source: Asian Development Bank.

Latest innovations, including different types of support and living arrangements to best address support older persons, should be considered in the context of how well these fit with cultural values and preferences of Pacific communities. An important consideration is how to balance institutional and external care with home-based care, and what prerequisites should be in place. Awareness raising and training for older people and their families and communities will be useful for preventing declines in functional capacity of older persons and improving the quality of family care. Intergenerational support reflects the strong community ties in the Pacific, and could be further built upon to facilitate a shared responsibility for care. Church-based organizations are strong advocates of respect and care for older people and can also be harnessed for further support alongside other community groups. The development of formal home and community care services, such as personal care visits, care management, home nursing, and community care centers, run by public, private, or community service organization operators, can ensure professional and quality care to those with more complex care needs and who lack adequate family support. Finally, the group home model is a potential option for a suitable approach to residential care, having trained caregivers and registered nurses' intervention as necessary, while still preserving the community-like environment, in accordance with "aging in place" principles.

Technology and innovation

A paradigm shift in the Pacific from reactive care toward more preventive solutions will be necessary to support healthy aging. Therefore, technology, especially in terms of information and communication technology (ICT), is a critical enabling aspect of aging-in-place to make the home conducive to the needs of older persons, promoting communication and social connectivity, as well as facilitating personal mobility and access to health care. Japan and the United States are among the leading providers and users of digital health devices for tele-monitoring, tele-inquiry, and tele-communication.

Private, philanthropic, and social funds are already being used to promote innovation in care for older persons. For example, in Hong Kong, China, there are social funds financed by the government, private corporations, and philanthropic organizations that encourage collaboration and innovative solutions to long-term care. This is an area where partnerships with the private sector could be further developed to respond to the ever-increasing demand for innovation in the sector. Private entrepreneurs in Japan have also integrated social welfare, including support to older persons, into their business models to deliver social impacts.

Although the Pacific has yet to adopt the latest technological advancements, the current state of technology in the subregion already supports substantial improvements in the quality and coverage of health information systems through digitization. This can facilitate more robust evidence-based responses to critical health issues, such as aging. It can also support delivery of services to remote populations and help address some of the constraints of limited human resources by using ICT to support care management and consultations with specialized professionals. Linking up the few specialists to provide distant consultations and monitoring and support local health and care workers, and individuals, is probably the most beneficial use of technology for the Pacific. Electronic health

information systems also capture detailed data that are useful for monitoring key health trends, such as tracking the age profile for NCDs hospital admissions and other curative services.

With many older people being more prone to feeling isolated and depressed, technology can also help alleviate stress by making communication and social connectivity, especially with relatives living abroad, easier and cheaper. Likewise, part-time home-care workers can check remotely on patients that they are supporting through available ICT. It is worth investigating further eHealth applications that can be feasible, given the current state of, and planned developments in, ICT-readiness across the Pacific.

Concluding remarks

Aging and quality care for older persons are not yet central to the agenda of most Pacific economies, but they are crucial to start folding these important issues into social, financial, and health planning and programs in the subregion. Currently, a country diagnostic and national strategic plan on development of long-term care in Tonga, one of the first in the Pacific, is being finalized under a technical assistance program with the Asian Development Bank (Box 2). Similar efforts will need to be initiated across the subregion to adequately address the needs of older persons. The key challenges that will need to be addressed include:¹

- Build the necessary fiscal space to further expand on an already high level of government expenditure on health to further finance an appropriate response to the epidemiological changes from communicable to noncommunicable diseases; and ensure that prevention, promotion, and management of NCDs take a life course approach, being inclusive and appropriate for the older population.
- Develop adequate services and facilities for addressing long-term care, particularly in remote rural areas and outer islands, on top of current insufficient provision of health-care services and livelihood opportunities in these communities.
- Address the limited supply of skilled health, particularly those with specialized training on gerontology, and care workers.
- Deal with the current wide service delivery gaps for common health conditions of older persons—including memory loss, urinary incontinence, depression, mobility, and fall risks—as well as early detection of diseases.
- Ensure a multisector approach, including not just health but also education, social welfare and protection, urban planning, and finance, among others, in coping with the rising demands of care for older persons.

Lead author: Ninebeth Carandang

Endnote

- ¹ A more comprehensive analysis on the challenges of aging in the Pacific are available in Ian Anderson and Wayne Irava. 2017. The Implications of Aging on the Health Systems of the Pacific Islands: Challenges and Opportunities, *Health Systems & Reform*, 3:3, pp. 191–202.

Box 2: Tonga's Long-Term Care National Strategic Plan, 2019–2024

Latest estimates show that older population in Tonga comprises 8.3% of the population (or about 8,881 people), and this is expected to reach 12.9% (22,100) in 2050. Based on global estimates that 3% of older persons require extensive care, and a further 8%–12% moderate care, this translates to approximately 250 people over the age of 60+ with severe care needs in Tonga, and a further 500–1,000 older persons with moderate care needs at present. The provision of care lies predominantly with the family, supplemented by a government-funded home care program delivered by a nongovernment organization (Ma'a Fafine moe Famili). There is no proper residential facility for older people, except for a small residence used as a rest home for five homeless older people provided by the Good Samaritan organization. A gap between care needs and services—combined with a high incidence of noncommunicable diseases, which increases the likelihood of developing functional impairments and leads to complex and multiple care needs, and high levels of out migration of younger adult populations—renders the current care system inadequate.

The Government of Tonga, with support from the Asian Development Bank, has developed a 5-year strategic plan to prepare the population for healthy aging, develop care and support services required by older people and their families, and build toward a more comprehensive and sustainable long-term care system. The objectives of Tonga's Long-Term Care National Strategic Plan (2019–2024) are to:

- **Create a caring inclusive society for older persons based on Tongan values.** Supporting families to be able to provide the appropriate care and engaging with the wider community not only to provide support to older persons, but also foster communities where older persons can meaningfully engage and remain active to build intergenerational solidarity. This is key to build “resilience within individuals and communities” to support prevention and support each other, thereby reducing demand on formal care services.
- **Further develop appropriate, safe, and quality range of integrated services for care for older persons.** This will include an expansion of current home care program; a home modification pilot, which involves complementary measures to ensure affordable supply of necessary supplies, devices, and equipment to enable successful aging in place; and 10 community care centers, providing a range of services, including day care, short-term respite care, social and health activities, among others.
- **Ensure that older people in Tonga are protected and receive the safest and highest possible care.** A quality framework for older persons care service providers will be developed to formally define roles and responsibilities, accountability mechanisms, monitoring systems, resources, and quality guidelines. A licensing and accreditation system will also be established.
- **Ensure that care providers have the training and support necessary to deliver high-quality, person-centered services.** Building on ongoing training programs, professional care certifications will be offered, along with opportunities for regular upgrading of specific skills related to complex care management and dementia.
- **Build a financially sustainable and equitable long-term care system.** This will involve financial modelling and government budgeting exercises to determine the most appropriate cost-sharing arrangements (between older persons and their families, and the public sector) and eligibility criteria for publicly funded services for sustainable and equitable delivery of long-term care services.
- **Develop leadership and promote multi-stakeholder collaboration and learning.** Currently, care for older persons falls under the purview of the Social Protection and Disability Unit within the Ministry of Interior. A specific long-term care unit will be established, with a clear mandate to coordinate and convene cross-sectoral stakeholders. The unit will be responsible for facilitating the implementation of the strategic plan and will lead to coordination mechanisms for monitoring.

Source: Asian Development Bank.

Spend better not more: Health financing in Papua New Guinea

Improved information and a coalition of the willing to tackle the hard system-disabling issues are both critical and necessary ingredients in developing a fit-for-purpose accountable health system in Papua New Guinea (PNG). A June 2019 Asian Development Bank (ADB) report adopts a holistic approach to considering the range of factors that undermine effective health service delivery (ADB 2019). The report goes further by unpacking key public financial management issues as well as health financing constraints and barriers in PNG, and provides a list of recommendations.

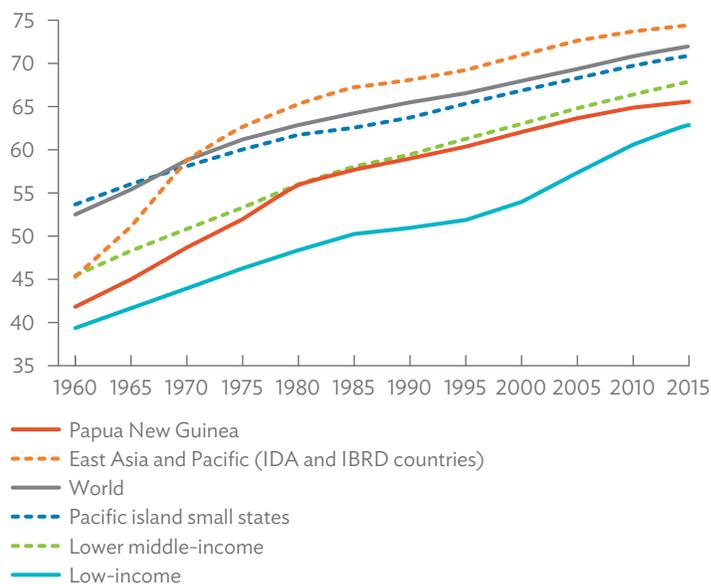
“We’re spending more on health, so why aren’t we doing better?”

Public health expenditure in PNG averaged the equivalent of 2.8% of gross domestic product during 2011–2015, more than double the lower middle-income country group average of 1.3% over the same period. However, despite spending more on health as a sector, some of PNG’s key outcome, output, process, and input indicators lag others. There are no clear correlations between investment made and health outcomes. Improvements in life expectancy in PNG have been slower over the past decade compared with the rest of the world, and are still the lowest in the Pacific (Figure 8). Infant, under 5 years old, and maternal mortality rates are higher than in countries at similar income levels, and the utilization of basic health services has declined markedly (Figure 9). Resource constraints have created gaps in health service delivery, creating a dysfunctional health system and increasing frustration from patients when health services are not available.

Disconnect between health spending and health outcomes is not new or unique to PNG. Globally and across income groups, countries grapple with the need to spend better, not necessarily more, which creates increased value for patients and the sector. This includes questions on efficiency, improving health outcomes with existing resources, and addressing inequities in service access. The common issue is the need to ensure that health resourcing is well-directed to support the delivery of basic health.

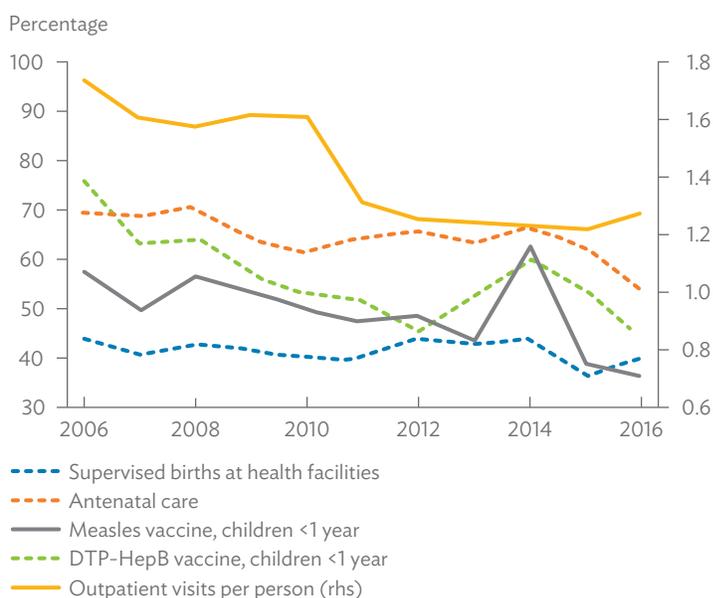
Financing for frontline health in PNG is fragmented, with some funds going directly to provincial health authorities, hospitals, or church-run providers, and some via provincial administrations. Other funding streams are subject to provincial or district negotiations from provincial internal revenue or discretionary service improvement program funds. Provincial internal revenue is expected to be the primary source of operational funding for rural health services, with health function grants (an intergovernmental transfer from the national government to the provincial governments) designed to only assist in filling the operational funding gap for provinces that, otherwise, do not have enough internal revenue to meet the operational costs of rural health services.

Figure 8: Trends in Life Expectancy, 1960–2014
(in years)



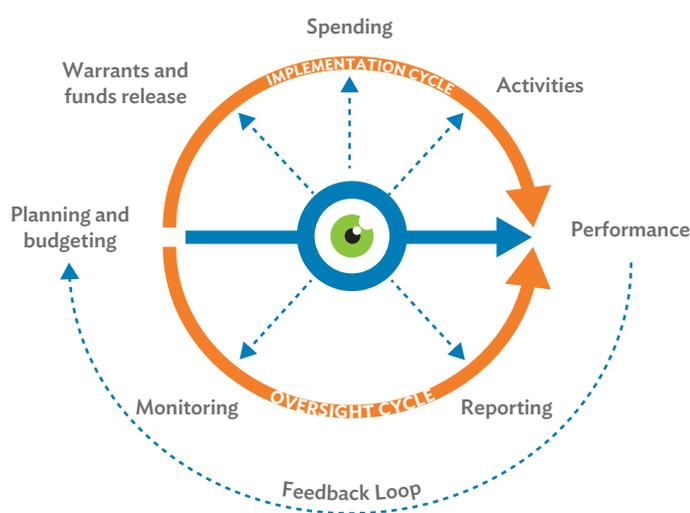
IBRD = International Bank for Reconstruction and Development, IDA = International Development Association.
Source: World Bank. World Development Indicators. <https://datacatalog.worldbank.org/dataset/world-developmentindicators> (accessed 15 October 2018).

Figure 9: Papua New Guinea Health Services Utilization, 2006–2016



DTP = diphtheria, pertussis (whooping cough), and tetanus; HepB = hepatitis B; rhs = right hand scale.
Source: National Department of Health.

Figure 10: Line of Sight in Health Service Delivery



Source: Asian Development Bank.

The report makes the case that “line of sight” obstructions due to a lack of information and transparency across the entire health service delivery chain are important factors that undermine accountability and the improved allocation and use of resources to achieve health outcomes (Figure 10). Through this lens, the report helps untangle a complex web of health financing issues in PNG and helps define some critical areas for investment and reform.

Improving information flows

Information is one of the key ingredients. Health officials at the national and subnational levels require accurate, timely, and integrated information to implement and oversee strategies and service delivery plans, and systematically measure progress against them. The information required to operate a country’s health service is complex, with data collected from a vast and widespread network both within the health sector and outside. Yet, without this information, health managers are effectively managing with one hand tied behind their backs. Several information systems are fundamental to an effective health service. The accounting system, human resource and payroll systems, health (statistical) information system, and pharmaceutical management system all collect and maintain the information that managers require to maintain the line of sight between the resources they use and the services they deliver.

In PNG, progress is being made in developing and improving these critical information systems, but much more is required. At the subnational level, where services are actually delivered and managed, old legacy systems based on basic word processing tools are still used to record finance and human resources; and information on payroll and pharmaceutical management is centrally administered and not readily available to health managers. Yet progress is being made in one of the harder areas—in the collection and reporting of statistical health information from the country’s vast network of rural facilities. In PNG, the health sector is adopting elements of

informatics to facilitate the collection of data through the electronic National Health Information System (eNHIS). The eNHIS collects service delivery data at the facility level and makes it available in a timely way to health managers at the district, provincial, and national levels to inform better decision-making. The eNHIS also creates alerts for health workers and includes training components to improve clinical governance in health workers. Creating this two-way information exchange is a significant achievement in PNG, a country with a vast topography and with 87% of its population living in rural areas, the second highest globally.

Yet, critical, better information systems alone will not translate spending into improved health sector performance in PNG. There are significant structural matters within the government system that need to be addressed to promote the timely disbursement of recurrent and capital resourcing to support frontline facilities. In PNG, getting the right amount of funding in the right place at the right time to finance payroll and operational costs remains a major challenge. Establishing a funding flow that is both adequate and certain will greatly enhance service delivery and promote accountability. In PNG, a combination of factors, including (i) a complex and evolving form of decentralization, (ii) regular economic volatility caused by economic shocks and unforeseeable natural events, and (iii) misaligned incentives, are all present as regular impediments in improving the adequacy and certainty of funding flows. Resolving these impediments will require close cooperation between the health sector and the central agencies that manage the country’s systems of government administration.

A vision to strengthen public financial management in Papua New Guinea’s health sector

Stronger public financial management—to ensure that adequate resources are allocated across various levels of the health system, and that they are delivered on time and accounted for—is the key to overcoming current health financing and service delivery issues in PNG. *Line of Sight* defines a list of 10 recommendations to addressing these important issues, framing them within ongoing government initiatives and development partner support. The fundamental objective is to align stakeholders as these challenges cannot be resolved or overcome by the health sector alone, but instead require a coalition of the willing. These specific recommendations concern the following:

- **Sustain provincial health authority implementation.** Continue the rollout of provincial health authorities to harmonize delivery models across provinces. This involves clarifying and simplifying responsibilities and funding flows through the health sector legal review, continuing to shape provincial partnership agreement frameworks, and actively engaging in the intergovernmental decentralization dialogue to ensure a coherent system architecture for the health sector.
- **Define church health services responsibilities and accountability.** Establish clear responsibilities and accountability for the public funding of church health services, and other service providers and partners in a province, through coordination, regulatory frameworks, and contractual relationships, including basic performance frameworks and monitoring or oversight arrangements.

- **Generate detailed information on health sector budget allocations and spending.** Ensure comprehensive and readily (and publicly) available information on health sector budget allocations and spending—by institution, function, facility levels, and main economic categories—through improving budget and reporting formats, including underlying classifications as needed, and strengthening information systems and analytical capacity.
- **Fill knowledge gaps about costs of basic services.** Fill gaps in knowledge about the costs of basic services—including adequate reflection of service costs in PNG’s geo-demographic setting, costings for various levels of hospitals, resource needs of the Policy on Free Primary Health Care and Subsidized Specialist Services, and of church health services—and identify appropriate financing sources and channels to gradually resource them through annual budgets.
- **Revisit intergovernmental financing arrangements.** Address the common issue of underfunding basic health services from provincial internal revenue, and revisit other system design issues, including the costing methodology to ensure adequate resourcing of needs, calculation method of provincial fiscal capacity, interaction with capital investment planning and decision-making, and relevance for church health service operational funding.
- **Develop a strategic approach to capital investment planning.** Introduce a strategic approach to capital investment planning based on the principles of equity, need, and affordability, taking into consideration the geo-demographic setting, existing facility distribution, as well as implications on health personnel and operational costs. This could be supported by a basic capital investment planning model and should be translated consistently into the planning framework, accompanied by processes and guidelines.
- **Explore suitable facility budgeting and resourcing approaches.** Learning from experiences, develop context-appropriate budgeting and facility resourcing approaches that are robust and best enable frontline service delivery activities to happen in a more timely and predictable manner with an acceptable level of probity. Processes should be formalized and accompanied by guidelines and training.
- **Stabilize government financing.** Consider options to stabilize government financing of the health sector over time, including the role that PNG’s Sovereign Wealth Fund could play, to facilitate both annual and multiyear strategic planning and budgeting, and avoid large year-on-year swings in funding that negatively affect service provision.
- **Prioritize health in the budget execution process.** Advocate for the prioritization of health in the national and provincial budget execution processes, including with the political leadership at the national and subnational levels; the Public Debt Committee that manages the government cash flow and determines the order and extent in which allocations are resourced throughout the year; and the legislature, general public, and media.
- **Establish processes and guidance notes for disaster response.** Translate experiences from disasters triggered by natural hazards into health sector processes and practical guidance notes for effective and efficient disaster response, with the aim of minimizing direct and indirect losses, damages, and disruptions to health service delivery systems.

As the health sector works more closely with central agencies to improve planning and budgeting, as barriers to funding pathways are removed, and as resourcing and funding are increasingly allocated to best meet patient requirements and promote value in health services, the focus will naturally move to monitoring and accountability. Improving the information system and training in its use (including change management) will become co-investments. As the sector establishes good information systems that facilitate the transfer of timely information, health managers at all levels and other interested parties will be able to monitor progress and make the strategic decisions necessary to drive improvement toward better health outcomes. PNG’s health performance historically might point to a health system that is “lost”, but *Line of Sight* shows how it can be found.

Lead author: Inez Mikkelsen-Lopez

Reference

ADB. 2019. *Line of Sight: How improved information, transparency, and accountability would promote the adequate resourcing of health facilities across Papua New Guinea*. Manila. June.

A regional approach to strengthening education in the Pacific

Despite significant progress toward ensuring universal access to primary education, improving the quality of education is still a challenge and, as a result, student learning outcomes remain poor. Although the results of the 2015 Pacific Islands Literacy and Numeracy Assessment (PILNA) showed that more year 4 and year 6 students in the region were at or above the expected proficiency level in numeracy compared with the 2012 PILNA (Figure 11), there was little or no improvement on the literacy side of the assessment (Figure 12).¹ This development highlights the need to exert greater effort to strengthen learning and provide the Pacific's young people with the right foundations for further education and work.

The perennial challenge of improving Pacific education

Efforts to improve the quality of education in the Pacific are constrained by economic, geographic, and political factors that may hamper access to technology, resources, and policy support. Social and cultural constraints—including gender inequality, accessibility considerations for persons with disabilities, and the need to account for the rich language diversity in the Pacific—affect learners' access to education. Teachers and education managers may have capacity and accountability issues; coupled with high staff turnover, this would affect delivery of education services. Poor coordination of complementary activities constrains opportunities for further learning and enrichment. Finally, gaps in data collection and analysis limit monitoring, evaluation, and learning that would guide the development of policies and programs to improve the education sector and its outcomes.

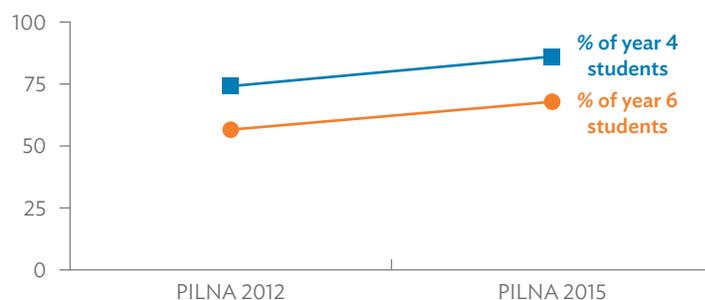
Recognizing the significance of these challenges, Pacific countries have affirmed their commitments to development goals and pursued partnerships with development partners and neighboring countries through regional institutions and high-level fora. Facing increasing local and global demand for a qualified workforce, governments have begun to integrate national education planning and budgeting, implement national policies for early childhood education, and push for curriculum reforms. Schools themselves are undertaking their own improvement initiatives.

Governments are also aware that regional solutions can significantly boost efforts to improve the quality of education. These create economies of scale that may not be possible when a country acts on its own, enabling more efficient use of scarce resources, and encourage institutions—regional as well as national—to coordinate and collaborate more closely, and learn from one another in the process.

The Pacific Regional Education Framework

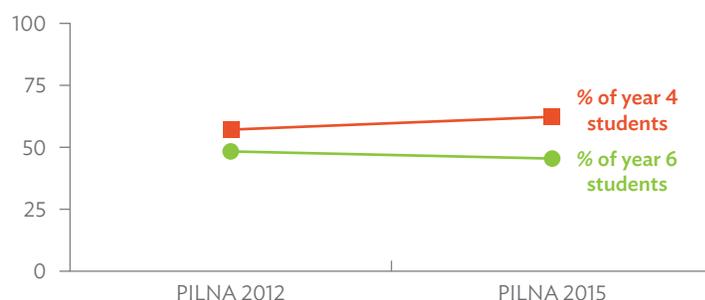
In this vein, the Pacific Heads of Education Systems (PHES) developed, under the auspices of the Pacific Islands Forum and with the support of the Asian Development Bank (ADB), the Pacific Regional Education Framework (PACREF) 2018–2030 program. Launched in October 2018, it outlines the region's education and training priorities and strategies that stress a collaborative, Pacific-based approach to establishing a world-class human capital base.

Figure 11: The 2015 PILNA Showed More Students Proficient (or Better) in Numeracy ...



Source: Educational Quality Assessment Program of the Pacific Community. 2016. *2015 Pacific Islands Literacy and Numeracy Assessment (PILNA) Regional Report*. Suva.

Figure 12: ... But Results for Literacy Were Less Favorable.



Source: Educational Quality Assessment Program of the Pacific Community. 2016. *2015 Pacific Islands Literacy and Numeracy Assessment (PILNA) Regional Report*. Suva.

The PACREF is divided evenly into three phases, with phase 1 to be carried out in 2019–2022. The phased approach would enable education ministers to conduct in-depth periodic reviews and accounts for the time required to obtain external financing. A 3-year rolling implementation process that requires annual updating will help decision-makers to monitor available resources closely, as well as to ensure continuity between phases.

Four regional agencies (i.e., the Educational Quality Assessment Program of the Pacific Community; the United Nations Educational, Scientific, and Cultural Organization; the United Nations Children's Fund; and the University of the South Pacific through its School of Education and Institute of Education) serve as the key implementing agencies for the PacREF. Oversight is shared among (i) a PACREF Facilitating Unit under the Office of the University of the South Pacific Vice-Chancellor, responsible for facilitating program operations of the four regional agencies as well as logistical and secretariat support; (ii) the Human Resources Development Working Group under the Council of Regional Organizations in the Pacific, coordinating implementation with the Facilitating Unit; (iii) a five-member steering committee composed of PHES

members serving on a rotational basis, representing the PHES on PACREF matters between PHES meetings; (iv) the PHES themselves, who ensure that the program addresses their respective countries' education needs and is being implemented smoothly at the country level; and (v) the education ministers of the Pacific Islands Forum member countries, which will meet every 2 years beginning in November 2020, to assess the PACREF's effectiveness and confirm the objectives and direction of the succeeding phases of the program.

The program identifies the following key policy areas, each with their own outcomes and strategies:

- **High-quality learning at all levels of education.** The PACREF seeks to develop inclusive, responsive curricula and programs that reflect Pacific values and culture, feature both cognitive and non-cognitive development, and promote gender equality and innovation. Phase 1 will produce tools that can be adapted to the national context for developing a curriculum with a Pacific identity and strengthening teacher competencies through standardized, regularly assessed, and continuous professional development opportunities. It will also develop quality assurance frameworks at the regional and national levels that cover external validation for qualifications and programs.

Further, the program is pursuing the establishment of quality learning environments at all levels through the appropriate pedagogy, new technologies, and enabling facilities and student care services. It will improve learners' information management systems for monitoring student performance and better inform future education interventions.

Latter phases of PACREF implementation in this area will cover specialist programs for language acquisition, information and communication technology-enabled learning, identifying and mitigating barriers to education, and ensuring that tertiary programs offer "future-focused" learning opportunities that meet labor market demand.

- **Multiple, accessible learning pathways and modalities to meet all learners' needs.** The PACREF will help create an enabling policy environment for school-level decision-making and flexibility to facilitate learning. Regional tools that can be adapted to the national context would help improve the governance, financing, program development, and quality assurance of early childhood care and education.

The program would also ensure seamless pathways between education levels and beyond, complemented by full participation of preschoolers and the most vulnerable learners (e.g., out-of-school and at-risk youths, girls, persons with disabilities, and remote communities). Phase 1 of the PACREF will support national education systems to mitigate the risks to transitions in education, as well as develop and implement technical and vocational education and training and other inclusive, alternative pathways for formal education and skills development.

- **Learners achieving full potential at all levels.** The PACREF aims to improve learning outcomes at all levels; namely, proficiency in literacy and numeracy (particularly at the primary level) and participation and success rates. Supporting access to early intervention programs, teacher training to improve literacy and numeracy instruction, and continuous, system-wide use of assessment for learning is expected to help achieve these outcomes.

Further, the PACREF would develop and implement programs to build life skills that consider the Pacific context, while helping learners respond to 21st century challenges and opportunities. This would include capacity building in information and digital literacy, programs for careers education and workplace readiness, and resource development to support programs that nurture non-cognitive skills.

Under this policy area, the program will also engage social agencies and collaborate with relevant partners to establish child protection policies and examine adult literacy to guide decision-making and policy development in this area.

- **Competent and qualified teachers and school managers.** The PACREF envisions schools staffed by teachers and school managers with the appropriate skills and certifications, the confidence of their communities, and access to a range of continued professional learning opportunities. Phase 1 will focus on improving understanding at all levels of education of teachers' professional standards and development, and regional application of performance management systems; and strengthening preservice training and developing mechanisms to validate training programs across countries. A set of regional standards, complemented by opportunities for development, will help school managers better work with teachers toward meeting students' needs.

Succeeding phases of program implementation will work on improving teachers' working conditions and remuneration, as well as establishing a code of ethics for teachers and school managers. It will support engagement and collaboration between the education system and community stakeholders, including teacher unions, and work to attract and retain quality teachers by marketing and advocating for the teaching profession.

Partnerships with interested national education systems, and relevant development partners and regional agencies will be centered on these priority areas. This would help interventions maintain the proper focus, as well as avoid redundant efforts.

ADB's support for the Pacific Regional Education Framework

Under the PACREF, development partners including ADB will pool and coordinate funding toward improving the delivery of agreed priority goods and services throughout the Pacific. This systematizes external efforts to support various parts of the framework, while building on achievements and lessons from prior interventions.

ADB's support for the PACREF is formalized as a technical assistance project approved in November 2018. The project will fund the mobilization of the framework's governance structure and implementation arrangements (including planning for financing, monitoring, and evaluation), and support the establishment of the PACREF Facilitating Unit. It also provides a potential vehicle for cofinancing to augment ADB resources. Support for the framework will emphasize learning between developing member countries as well as monitoring, evaluation, and learning, including sex-disaggregated data, to inform research and education programming that improve gender equality in learning outcomes, completion rates, access to quality job opportunities, and school-to-work transitions.

Further, ADB will promote open, distance, and flexible learning to expand learning opportunities by developing e-learning resources and capacity to use e-learning in Fiji as a pilot with aims to expand regionally. ADB and the New Zealand government have both supported e-learning in the Pacific and will collaborate on developing a regional repository as a management platform for e-learning materials that can be adapted to national contexts. This repository will initially focus on primary- and secondary-level learning e-resources for primary and secondary education learning in literacy, math and sciences, and seek to support girls to pursue studies in science and math.

Concluding remarks

By pursuing a regional approach in close collaboration with national, regional, and multilateral partners, the PACREF 2018–2030 program aims to deliver sustainable, high-quality education resources that can help improve learning outcomes in all Pacific countries. It answers the Pacific governors' call at the 50th Annual Meeting of the ADB Board of Governors for more Pacific-based solutions and learning between developing member countries in response to global education challenges.

ADB's support of the PACREF will help improve regional mechanisms for monitoring, evaluating, and designing education initiatives; enhance accessibility through e-learning; and support the exploration of options to further promote knowledge development and sharing in the Pacific. It will also provide a platform for policy dialogue, and a possible channel for additional resources in support of regional education initiatives.

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Endnote

- ¹ The results of the 2018 PILNA have not yet been released publicly.

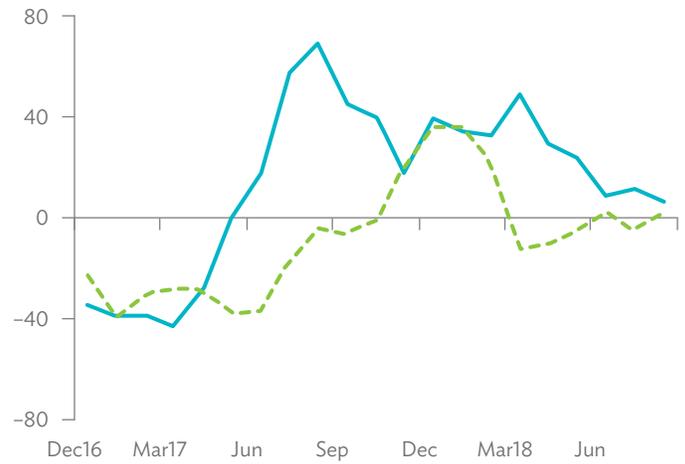
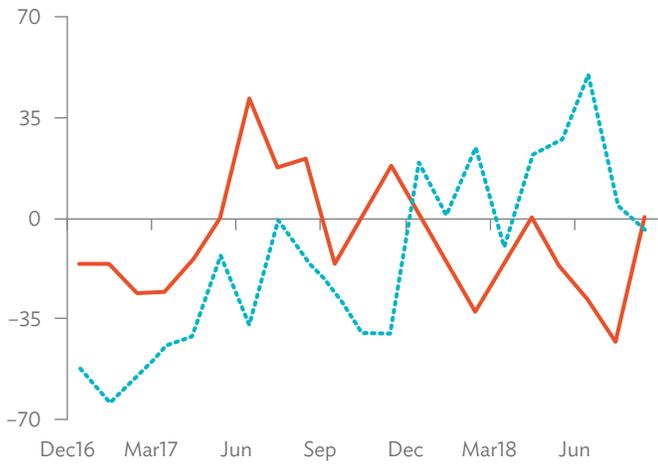
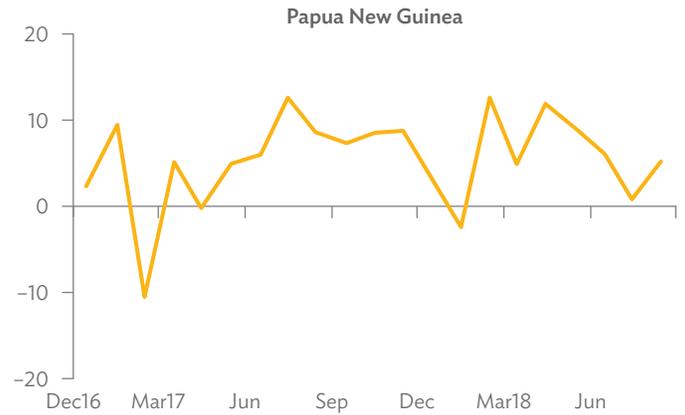
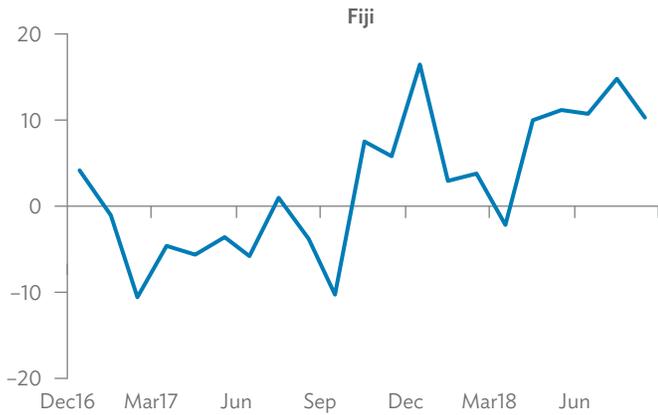
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Nonfuel Merchandise Exports from Australia
(A\$; y-o-y % change, 3-month m.a.)

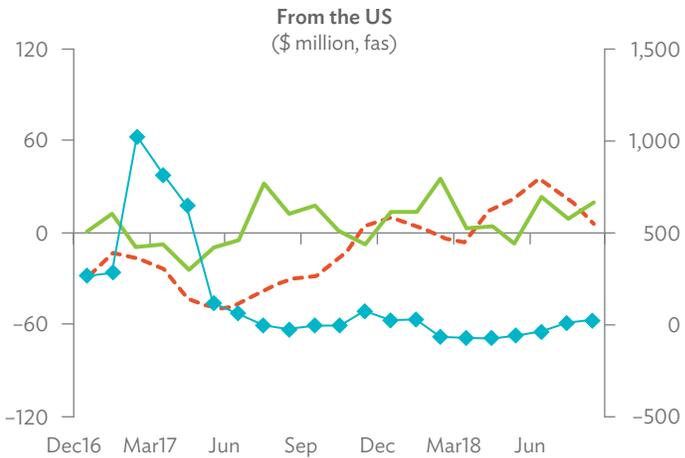
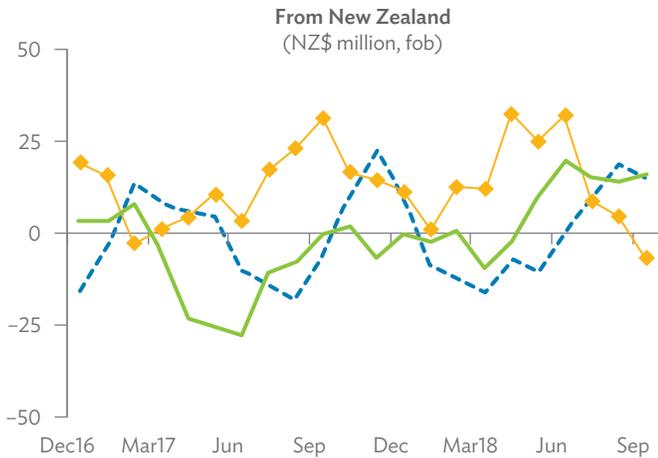


— Kiribati ····· Nauru

— Solomon Islands - - - - Vanuatu

A\$ = Australian dollars, m.a. = moving average, y-o-y = year-on-year.
Source: Australian Bureau of Statistics.

Nonfuel Merchandise Exports from New Zealand and the United States
(y-o-y % change, 3-month m.a.)

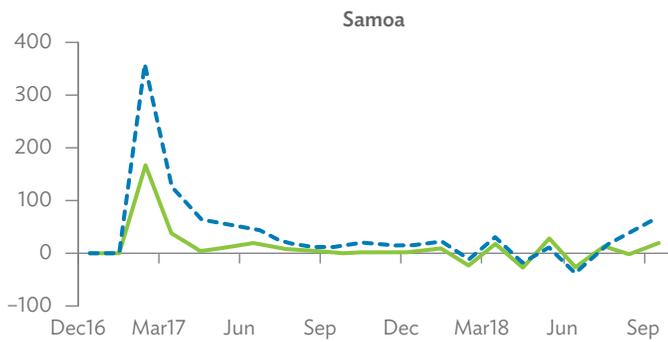
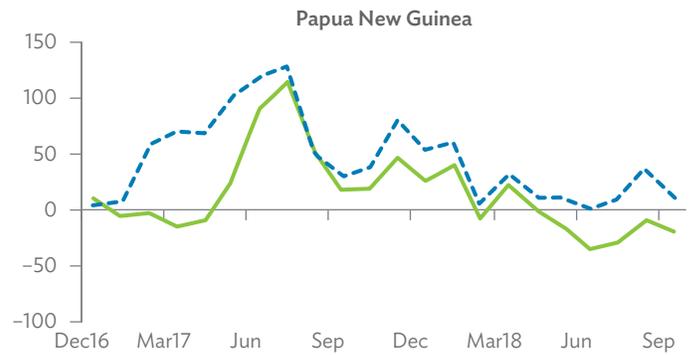
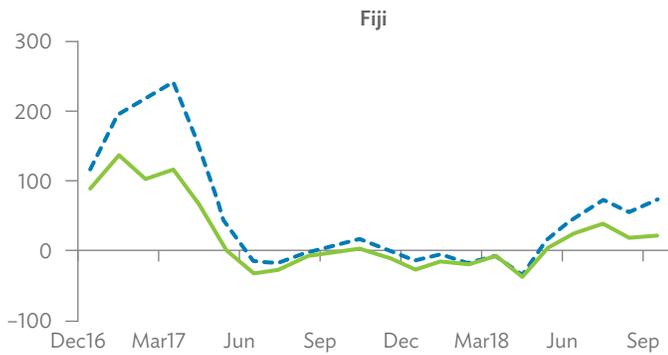


◆ Cook Islands - - - - Samoa — Tonga

— FSM ◆ RMI - - - - Palau

fas = free alongside, fob = free on board, FSM = Federated States of Micronesia, m.a. = moving average, NZ\$ = New Zealand dollar, RMI = Republic of the Marshall Islands, US = United States, y-o-y = year on year.
Sources: Statistics New Zealand and US Census Bureau.

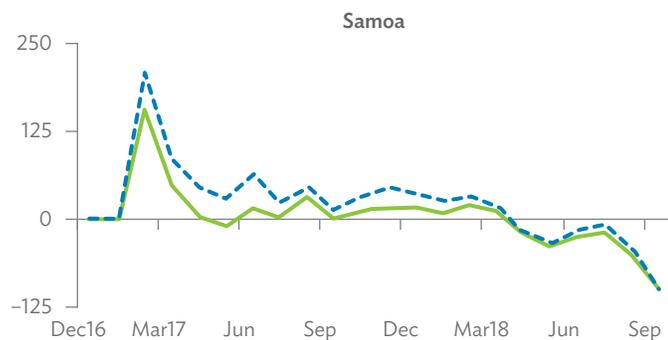
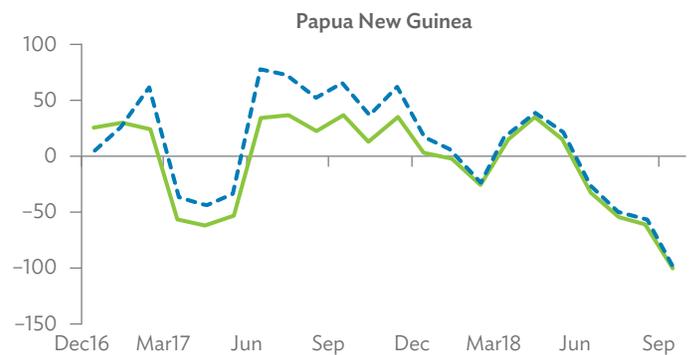
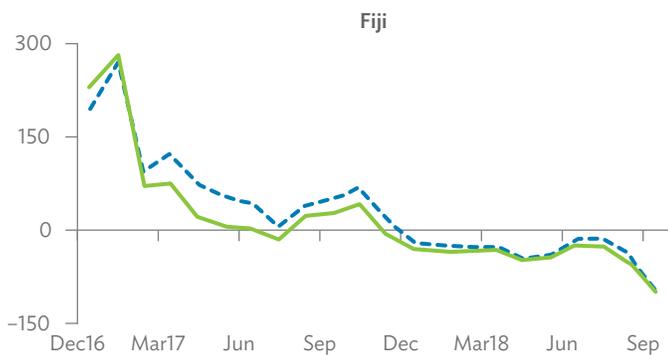
Diesel Exports from Singapore
(y-o-y % change, 3-month m.a.)



— Volumes - - - Values

m.a. = moving average, y-o-y = year on year.
Source: International Enterprise Singapore.

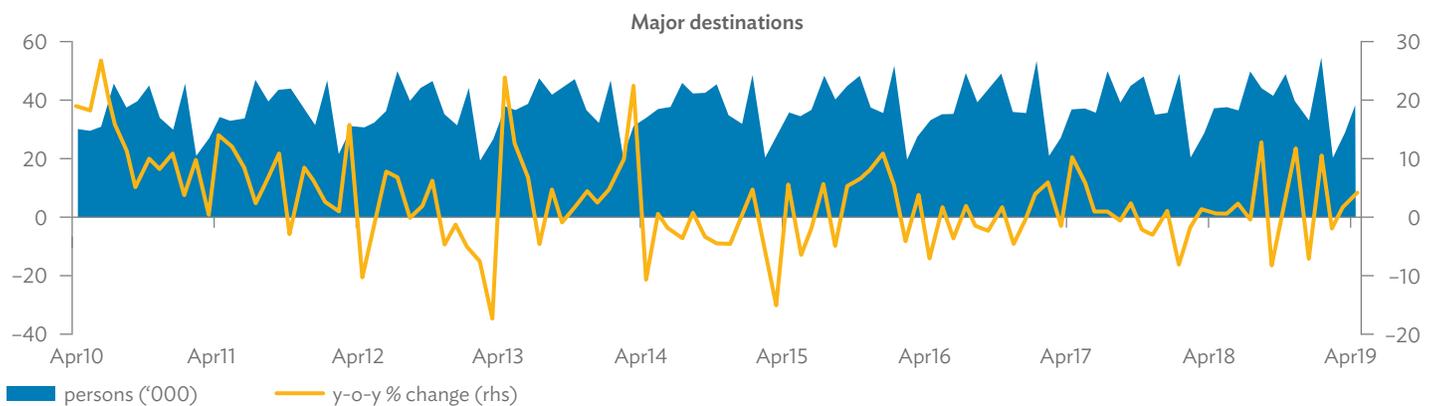
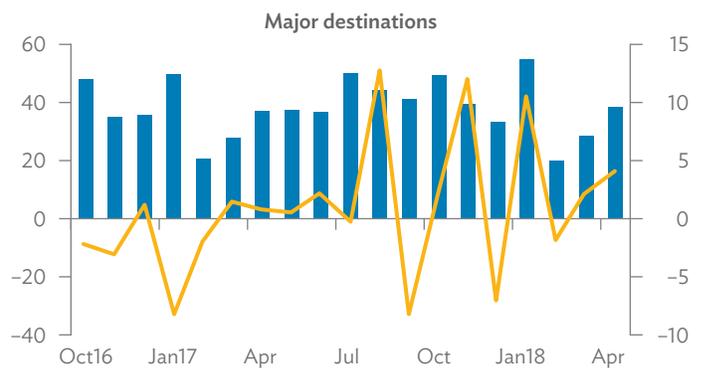
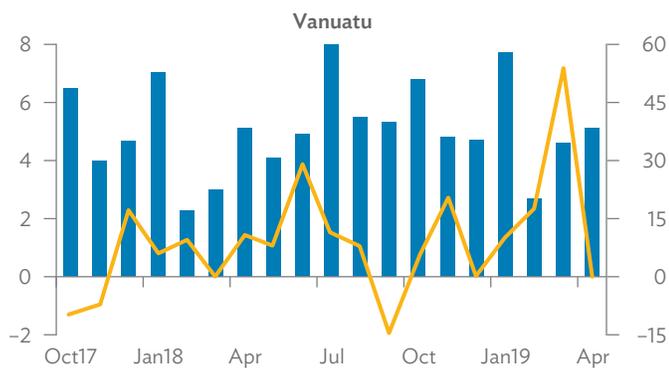
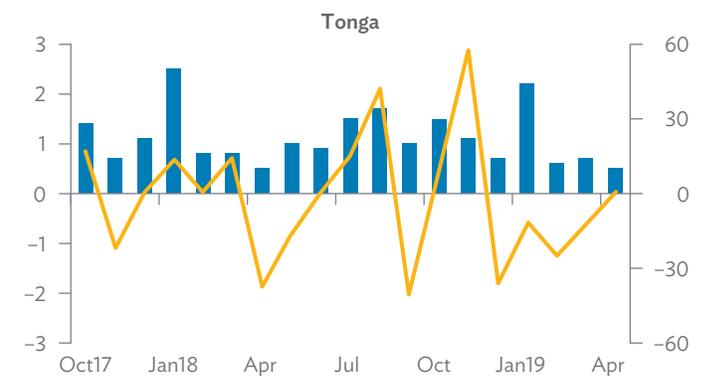
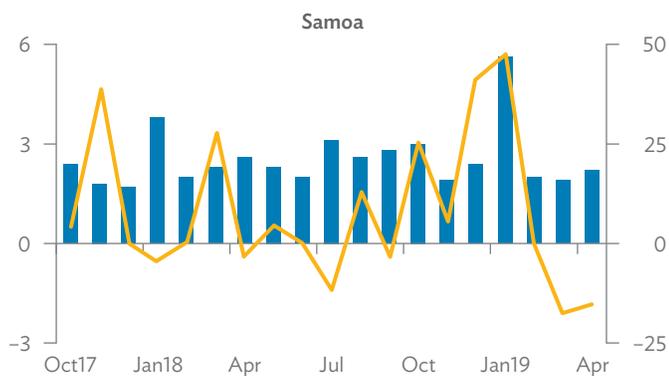
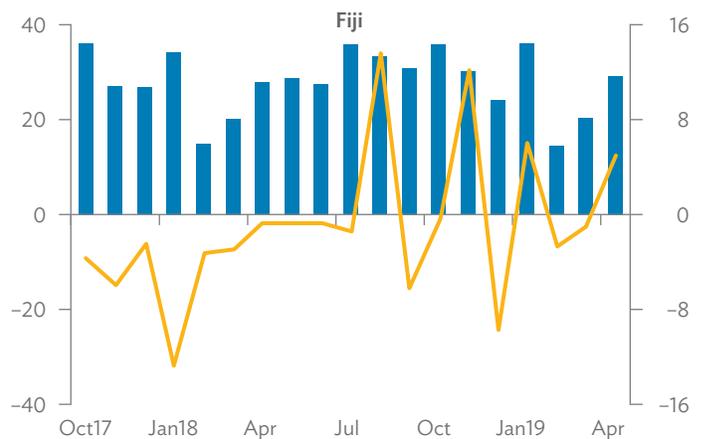
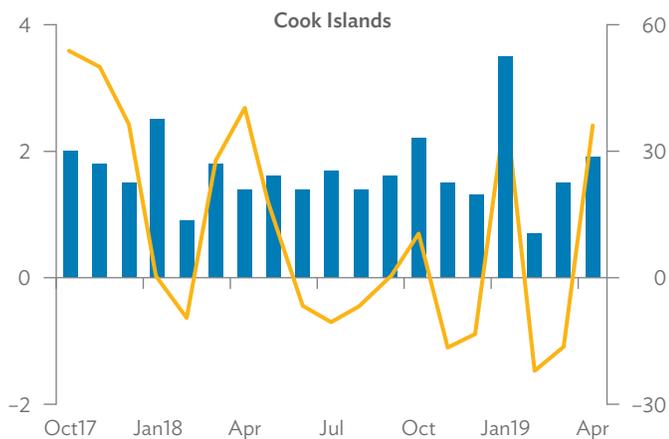
Gasoline Exports from Singapore
(y-o-y % change, 3-month m.a.)



— Volumes - - - Values

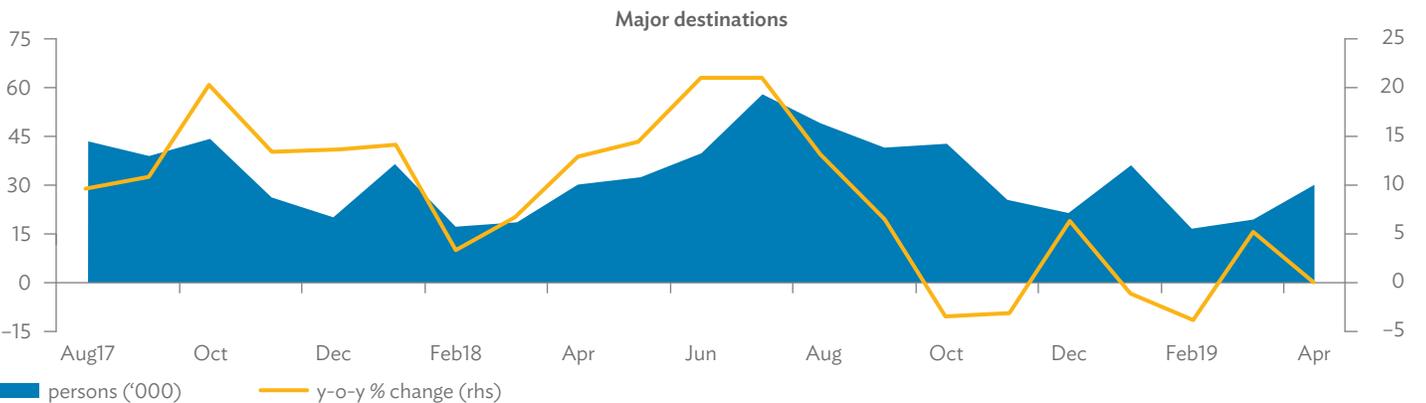
m.a. = moving average, y-o-y = year on year.
Source: International Enterprise Singapore.

Departures from Australia to the Pacific (monthly)



rhs = right-hand scale, y-o-y = year on year.
Source: Australian Bureau of Statistics.

Departures from New Zealand to the Pacific (monthly)



rhs = right-hand scale, y-o-y = year-on-year.
Source: Statistics New Zealand.

Latest Pacific Economic Updates

	GDP Growth (% p.a.)			Inflation (% annual avg.)			Fiscal Balance (% of GDP)		
	2018e	2019p	2020p	2018e	2019p	2020p	2018e	2019p	2020p
Cook Islands	8.9	4.2	4.5	0.4	-0.1	1.5	4.1	-1.9	1.0
Fiji	4.2	2.9	3.2	4.1	3.5	3.0	-4.3	-3.3	-2.6
Kiribati	2.3	2.3	2.3	2.1	2.3	2.2	-20.1	-23.2	-20.8
RMI	2.5	2.3	2.2	1.1	0.5	1.0	2.5	2.0	3.0
FSM	0.8	2.7	2.5	1.0	0.7	1.5	10.0	7.0	10.0
Nauru	-2.4	-1.0	0.1	3.8	2.5	2.0	8.5	0.1	0.3
Palau	0.5	3.0	3.0	1.1	0.5	1.5	4.3	8.9	1.9
PNG	0.2	3.7	3.1	4.5	4.2	4.7	-2.5	-2.1	-1.6
Samoa	-2.2	2.0	3.0	3.7	2.4	2.0	0.1	-3.5	-3.5
Solomon Islands	3.0	2.4	2.3	3.3	2.5	2.5	-0.6	-1.2	-2.3
Timor-Leste ^a	-0.5	4.8	5.4	2.2	1.9	2.5	-4.8	-25.9	-26.2
Tonga	0.4	2.1	1.9	5.3	3.5	3.3	1.6	-1.2	-1.1
Tuvalu	4.3	4.1	4.4	1.8	3.4	3.5	33.9	-1.1	1.4
Vanuatu	3.2	3.0	2.8	2.2	2.0	2.0	6.7	4.4	5.0

FSM = Federated States of Micronesia, GDP = gross domestic product, p = projection, PNG = Papua New Guinea, RMI = Republic of the Marshall Islands.

^a Timor-Leste GDP is exclusive of the offshore petroleum industry.

Sources: ADB. 2019. *Asian Development Outlook 2019 Supplement (July 2019)*. Manila; and statistical releases of the region's central banks, finance ministries and treasuries, and statistical bureaus.

Key data sources:

Data used in the *Pacific Economic Monitor* are in the ADB PacMonitor database, which is available in spreadsheet form at www.adb.org/pacmonitor

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