Pacific Economic Monitor

December 2019

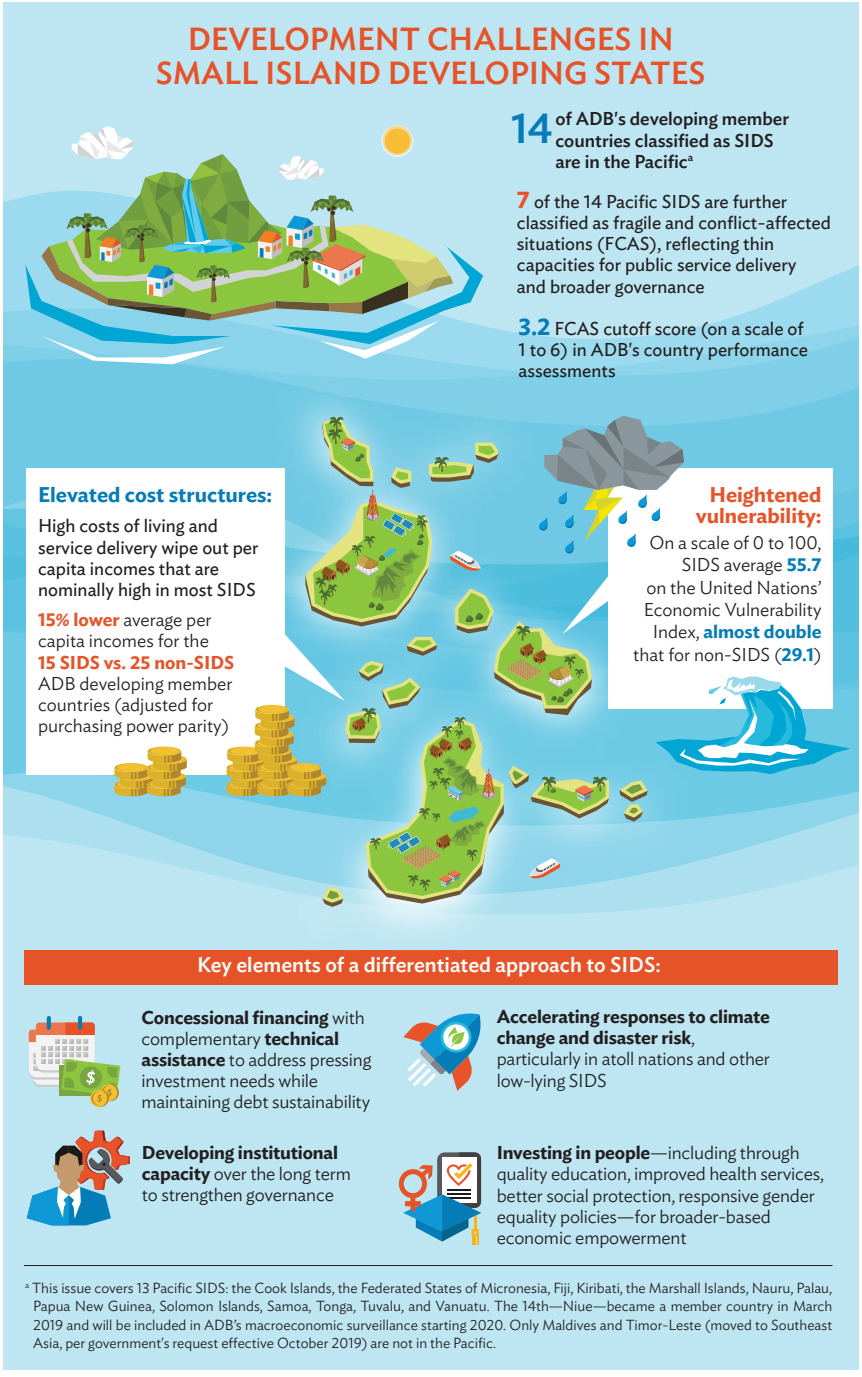
www.adb.org/pacmonitor

The *Monitor* provides an update of developments in Pacific economies and explores topical policy issues.

Contents

Highlights

- **Trade conflict continues to weigh down on the global economy.** Prospects for global growth continue to weaken as the ongoing trade conflict slows growth in major economies, including the People's Republic of China. The weak external environment translates into a softer 2019–2020 outlook for the Pacific through subdued exports, including from Fiji.
- **Focusing on the development needs of small island developing states.** The complex interplay among geographic and physical challenges faced by small island developing states manifests in elevated cost structures and heightened economic vulnerability that severely constrain development prospects. Compounded by fragility from thin institutional capacities for effective governance and elevated climate change risks—a clear "threat multiplier"—these challenges call for a differentiated approach to long-term development strategies among small island developing states.



Sources: Asian Development Bank and United Nations Department of Economic and Social Affairs.

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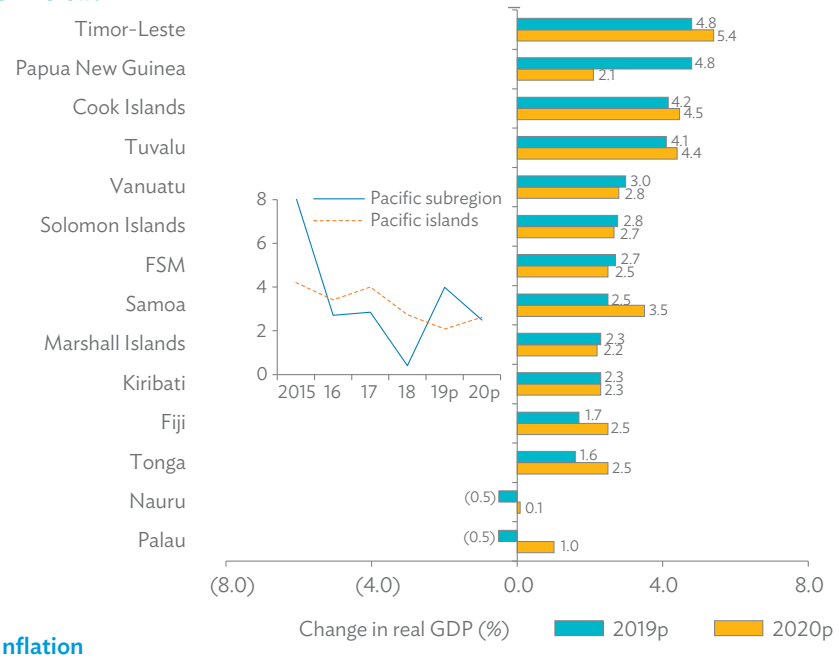
This edition of the *Monitor* was prepared by Erik Aelbers, Ananya Basu, Robert Boumphrey, Jacqueline Connell, Prince Cruz, Noel Del Castillo, Edward Faber, Lily Anne Homasi, Magdelyn Kuari, Rommel Rabanal, Cara Tinio, Isoa Wainiqolo, and James Webb of the Pacific Department. Publishing production assistance was provided by Cecil Caparas.

Abbreviations

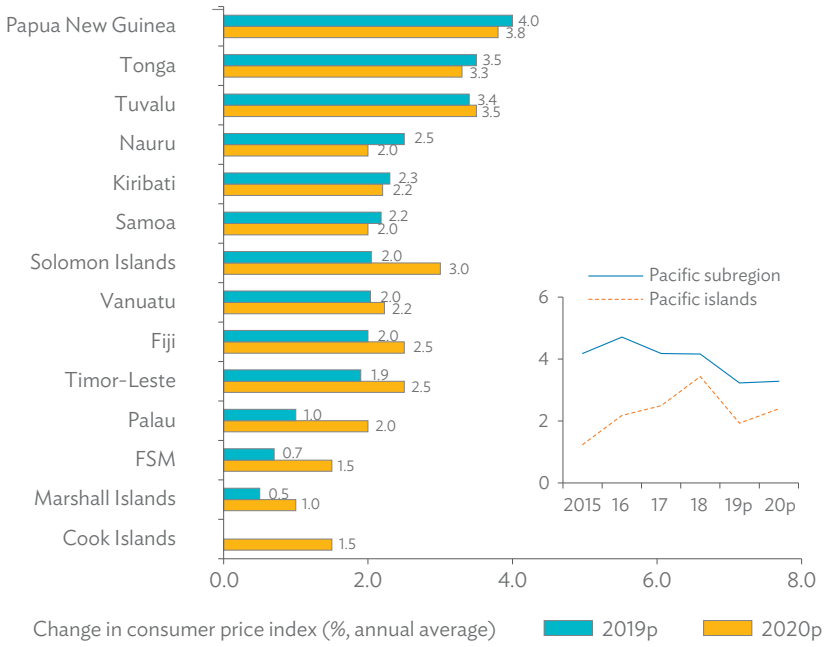
ADB	Asian Development Bank
A$	Australian dollar
F$	Fiji dollar
FSM	Federated States of Micronesia
FY	fiscal year
GDP	gross domestic product
ICT	information and communication technology
K	Papua New Guinea kina
lhs	left-hand scale
m.a.	moving average
NZ$	New Zealand dollar
PNG	Papua New Guinea
rhs	right-hand scale
US	United States
Vt	Vanuatu vatu
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. Niue joined ADB in March 2019 while Timor-Leste was moved to Southeast Asia subregional grouping in October 2019. These changes will be reflected in July 2020 Pacific Economic Monitor.
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.

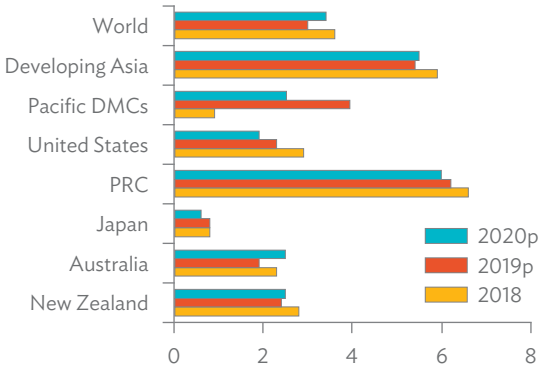
Fiscal years end on 30 June for the Cook Islands, Nauru, Samoa, and Tonga; 31 July for Fiji; 30 September for the Republic of the Marshall Islands, the Federated States of Micronesia, and Palau; and 31 December elsewhere.

INTERNATIONAL AND REGIONAL DEVELOPMENTS

Global outlook remains precarious; prospects mixed for major economies

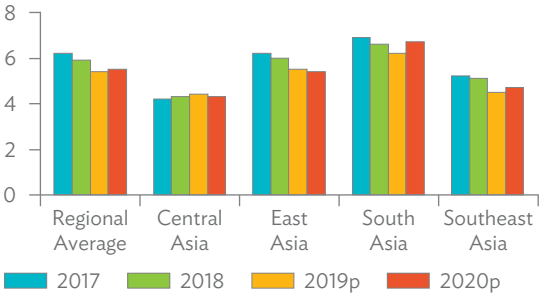
- Global growth is expected to further decelerate to 3.0% in 2019 as continued trade and geopolitical tensions further increase uncertainty and take a toll on global economic activity. Similarly, growth is expected to moderate in developing Asia from 5.9% in 2018 to 5.4% in 2019. Slower growth among the larger economies in East and Southeast Asia, on top of the gloomy global trade situation, is projected to significantly weaken the region's economic expansion.
- Economic outlook for the Pacific subregion has improved because of better-than-expected developments in some economies. The initial 2019 growth forecast of 3.5% has been revised upward to 4.0%, driven mainly by higher liquefied natural gas production in Papua New Guinea and increased construction expenditure in Samoa and Solomon Islands. However, project delays in Papua New Guinea, tepid growth in some economies, and slower recovery in others will likely moderate subregional growth to 2.5% in 2020.
- The United States (US) economy grew at an annualized rate of 2.1% in the third quarter of 2019 -- faster than expected but more slowly than in the previous quarter. Strong consumer spending and higher government spending supported the latest expansion. However, gross private domestic investment continued to decline due to global trade uncertainty and fears of domestic manufacturing slowdown. As risks remain on the downside, GDP growth is expected to decelerate to 2.3% in 2019 and 1.9% in 2020.
- Growth in the People's Republic of China (PRC) decelerated in the third quarter of 2019 amid weak domestic demand and the protracted trade conflict with the US. The economy posted 6.0% growth in the third quarter of 2019, its slowest quarterly growth since 1992. Retail sales, an important indicator of consumption in the PRC, expanded by 7.8%. However, trade has been lower than expected. In US dollar terms, the PRC exports fell 3.2% in September 2019 compared with the previous year, while imports declined by 8.5%. The continued impact of the PRC's trade conflict with the US and sluggish investment pose significant risks to growth. The latest forecast indicates that the economy will grow by 6.2% in 2019 and 6.0% in 2020.
- The Japanese economy grew at its slowest pace in a year in the third quarter of 2019 as the global trade tensions and weak global demand hit exports. Its economy grew at an annualized rate of 0.2% in the third quarter of 2019, slowing sharply from the 1.8% growth it posted in the previous quarter. Although capital spending accelerated by 0.9%, private consumption only grew 0.4% this quarter, slower than the previous quarter. The growth outlook for Japan's economy in 2019 is at 1.2%, and a slower expansion for 2020 at 0.5% as the hike in sales tax, which took effect in October, eventually affects consumer demand.
- Australia's economy expanded at an annualized rate of 0.5% in the second quarter of 2019. Government spending on infrastructure and an export boom were the main drivers of growth. Disruptions in Brazil and record steel production in the PRC contributed to higher international prices for iron ore. This, combined with a weakening of the Australian dollar, resulted in a substantial increase in the value of iron ore exports. For the first time since 1975, the economy posted a current account surplus. Meanwhile, domestic consumption remains weak despite a lower savings rate indicating subdued wages and high household debt. Positive domestic developments may be tempered by worsening global trade tension. The Consensus Economics forecast is growth of 1.9% in 2019 and 2.5% in 2020.

GDP Growth
(%, annual)



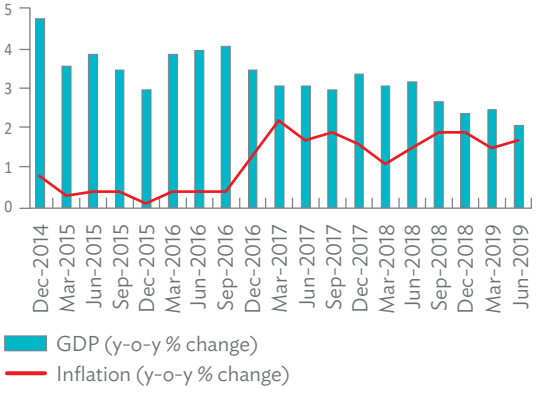
DMC = developing member country, GDP = gross domestic product, p = projection, PRC = People's Republic of China.
Notes: Developing Asia and Pacific DMCs as defined by ADB. Figures are based on ADB estimates except for World GDP growth.
Sources: ADB. 2019. *Asian Development Outlook 2019 Update: Fostering Growth and Inclusion in Asia's Cities.* Manila; IMF. 2019. *World Economic Outlook October 2019: Global Manufacturing Downturn, Rising Trade Barriers.* Washington.

GDP Growth in Developing Asia
(%, annual)



GDP = gross domestic product, p = projection.
Source: ADB. 2019. *Asian Development Outlook 2019 Update: Fostering Growth and Inclusion in Asia's Cities.* Manila.

New Zealand Economic Indicators
(quarterly)

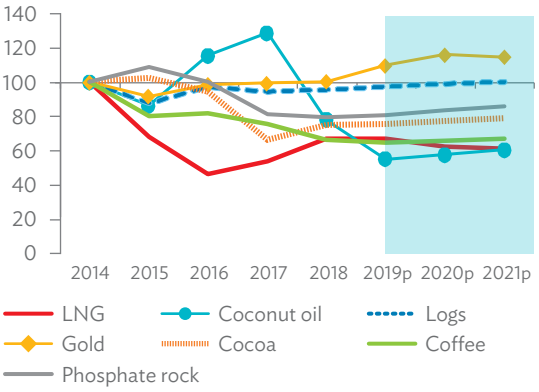


GDP = gross domestic product, y-o-y = year-on-year.
Sources: Statistics New Zealand and Reserve Bank of New Zealand.

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

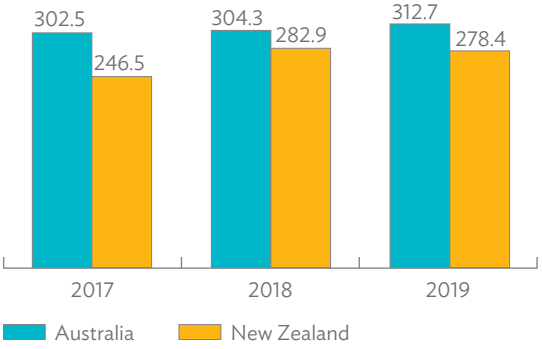
Source: World Bank Commodity Price Data (Pink Sheets).

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–August totals)



Sources: Australian Bureau of Statistics and Statistics New Zealand.

Lead authors: Noel Del Castillo and Rommel Rabanal

- The New Zealand economy grew at an annualized rate of 0.5% in the second quarter of 2019, slower relative to the previous quarter's growth of 0.6%. Widespread growth across the service industries resulted in a 0.7% increase in the second quarter. Expansion in agriculture, forestry, and fishing was partly offset by weaker manufacturing output that was mostly because of the declines in food, beverage, and tobacco. A slowdown in the PRC, New Zealand's biggest trade partner, is a significant external risk to its economy. With growth expected to moderate in the remainder of 2019, full year forecast by Consensus Economics is at 2.4% and 2.5% in 2020.

Commodity outlook shaped by global uncertainties

- Despite the spike in oil prices observed in September 2019, because of temporary production disruption in Saudi Arabia, average Brent Crude oil prices have been falling since the middle of 2019. Weak global growth outlook and robust oil production are driving the current trend, which is expected to persist until 2020. Natural gas prices have likewise fallen in the third quarter of 2019, driven by rapid growth in supply. Despite strong demand for cleaner energy sources, natural gas prices in the third quarter of 2019 are now 34.2% lower relative to the same quarter of the previous year as higher production and rising inventories pushed prices downwards. However, sustained demand for cleaner energy substitute will help stabilize natural gas prices in the short term amid an uncertain global economic outlook.

- Most commodity prices have either stabilized or increased in the third quarter of 2019. Rice and corn prices are 4.0% and 8.0% higher year-on-year (y-o-y) because of minor supply contractions. The price of Arabica coffee rose by 3.6% y-o-y as heavy rains in Brazil will contract global supply. Cocoa prices have been generally stable with a bumper harvest in Côte d'Ivore, the world's largest producer, being offset by a smaller crop in Ghana, the second largest producer. Gold prices are 21.6% higher in the third quarter of 2019 relative to the previous year. It has greatly benefited from strong demand, lower interest rates by the US Federal Reserve, and heightened global uncertainty. Protracted trade tensions are expected to negatively affect the outlook for major agricultural commodities while the prices of precious metals, such as gold, will likely benefit from heightened uncertainty in and weaker prospects of the global economy.

Weakening tourism to the Pacific

- Tourism from Australia to major South Pacific destinations rose by 2.8% (y-o-y) during the first 8 months of the year. Although this still represents an acceleration from last year's performance, growth slowed considerably during the middle months of 2019. Vanuatu recorded the most pronounced slowdown in the May–August 2019 period, despite the introduction in June of another regular flight service linking Melbourne and Port Vila. By contrast, the new twice-weekly flights between Brisbane and Apia have fueled a sharp acceleration in the number of Australian tourists visiting Samoa. Australian tourism to the Cook Islands and Fiji also eased, but generally remained solid. However, the number of Australian tourists visiting Tonga has dropped sharply in recent months, continuing a reversal from last year's strong growth. Heightened uncertainties regarding spillovers of a weaker global outlook on the Australian economy, and a measles outbreak in Samoa, appear to be causing travelers to postpone short-term tourism plans to neighboring Pacific islands.

- In New Zealand, tourism to the South Pacific is descending from last year's peak. The number of tourists visiting Pacific destinations is now lower by 1.6% (y-o-y) during January–August 2019. New Zealand tourism is down across the board in the Pacific, with the largest decline recorded in the Cook Islands, followed by Tonga and Vanuatu. The New Zealand economy has so far been less affected by global headwinds and outbound tourism to other destinations remains strong, indicating that the ongoing decline in travel to the Pacific is caused more by market saturation following recent years of strong growth.

Sustaining tourism-led growth in the Cook Islands

Lead author: Lily Anne Homasi

The Cook Islands, a small island nation in the South Pacific, is known for its serene beaches and rich culture, and is one of the most sought-after tourist destinations in the world. As the backbone of the economy, tourism receipts were the equivalent of 48.8% to gross domestic product (GDP) in 2018 (Figure 1). With GDP per capita of $19,048.6 in 2018, the Organisation for Economic Co-operation and Development graduated the Cook Islands from "middle-income country status" to "high-income country status" in July 2019, the first Pacific island nation to do so (Ministry of Finance and Economic Management, 2019). Tourism and public spending also allowed for high GDP growth rates, estimated at 8.9% in fiscal year (FY)2018 (ended 30 June) and 4.2% in FY2019 (Figure 1) (Asian Development Bank [ADB] 2019).

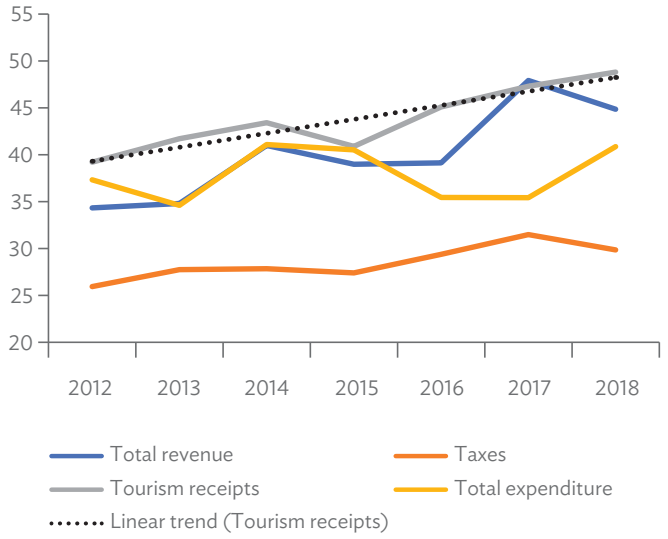
A Polynesian country with a population of about 17,400 as of the 2016 census, the Cook Islands continues to have free association with New Zealand, providing free movement of Cook Islanders to work, study, and reside in New Zealand. The island nation receives technical and funding assistance annually, two thirds of which come from the Government of New Zealand. For FY2019–FY2021, NZ$67 million in New Zealand aid funds were allocated to social services. Together with a solid tourism industry, the continued support of New Zealand provides Cook Islanders with the highest economic security compared with its Pacific neighbors.

The Cook Islands' third National Sustainable Development Plan (NSDP) 2016–2020 (Te Kaveinga Nui), has the vision "to enjoy the highest quality of life consistent with the aspirations of our people, and in harmony with our culture and environment." As a crosscutting industry, tourism contributes to achieving all of the plan's 16 goals, particularly goal 2 (economic growth), goal 3 (water and sanitation), goal 6 (sustainable energy and transport), and goal 7 (healthy lifestyles).

This article discusses crucial role of tourism, as well as some of the risks it poses for the broader economy. Also, the article highlights some of the areas that will strengthen this essential industry for the Cook Islands in the years to come.

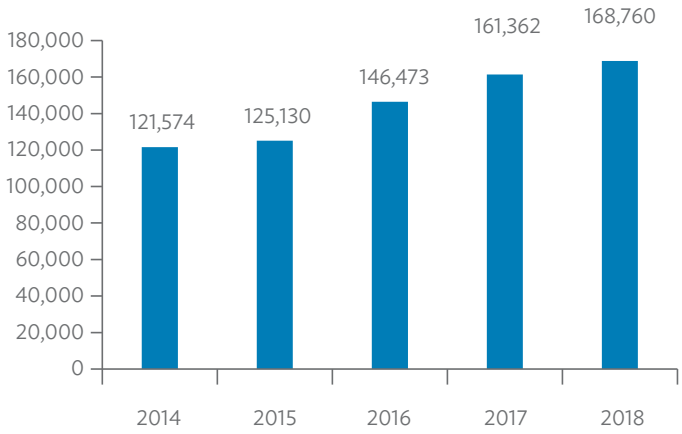
Tourist arrivals have risen from 121,574 in 2014 to 168,760 in 2018, a 38.8% growth that indicates a high potential for further growth (Figure 2). The month of July continues to set the highwater mark in tourist arrivals each year, with July 2018 reporting 18,332 arrivals in the month (compared to 13,184 in July 2014). July marks the annual *Te Maeva Nui* festival that attracts thousands of visitors to Rarotonga to celebrate the nation's Constitution through arts and crafts, and singing and dancing. It is also the height of the New Zealand winter, when an island escape is most appealing, and coincides with school holidays. New Zealand dominated visitor arrivals with 113,341, followed by Australia with 27,193, and Europe with 12,440 in 2018 (NZRTI 2018). The vast majority visited for vacation purposes, with over 60% of these visitors of the working age-group between 24 years and 59 years.

Figure 1: Cook Islands Government Revenues and Expenditure
(% of gross domestic product)



GDP = gross domestic product.
Sources: Government of the Cook Islands and Asian Development Bank estimates.

Figure 2: Cook Islands Visitor Arrivals (2014–2018)



Source: Government of the Cook Islands, Ministry of Finance, National Statistics Office.

Tourism has been a game-changer to private sector engagement and promotion of cross-cutting issues. Most employment on Rarotonga is related to tourism. For instance, in most hotels or accommodation, there would be local entertainment, and arts and crafts showcased to provide the tourists with a taste of the Cook Islands' unique Polynesian culture.

The Cook Islands' 2016 census shows that the private sector is the largest employer in the country, employing about 4,100 people or 55% of the working-age population (Government of Cook Islands 2016a). Of this, 88.2% were employed in retail and other tourism-related sectors, with an almost equal gender split (51.7% female). More recently, the 2019 Cook Island Business Survey contacted

over 300 businesses, with most providing accommodation and tour operators services, and others focusing on smaller-scale goods and services. This shows the predominant role of the private sector in the tourism industry, and in expanding employment opportunities for women as well as men.

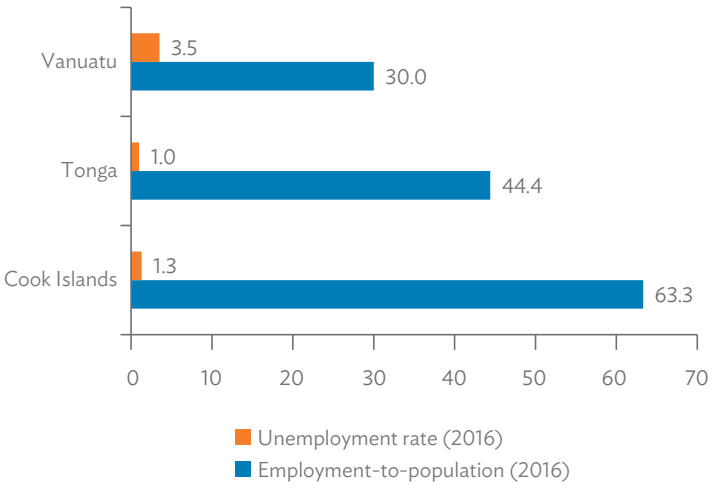
The reliance on tourism is demonstrated through employment data. In 2016, the Cook Islands had a higher employment-to-population ratio than Tonga and Vanuatu. In the same year, the Cook Islands unemployment rate was also relatively low at 1.3% (Figure 3). With free movement of Cook Islanders to New Zealand, shortages of both skilled and unskilled workers industry persist, with the Cook Islands employing labor from other Pacific islands, notably Fiji, to meet the shortfall. This example of South–South economic integration encourages the movement of persons within the region to meet demands for labor, fosters people-to-people linkages, enhances cultural exchange, and provides economic opportunities for Pacific islanders.

However, the free movement of people also carries some unintended consequences, such elevated health and security risks, as well as environmental issues. The 2015 Evaluation Report of the Cook Islands Tourism Sector Support recommended focusing Destination Development Funding to further preserve the culture and manage the environment. The review also encourages more local events to be embedded as key features in marketing strategies to attract arrivals from high-earning countries such as Europe and the United States (Wilson, Corbett, and Lahman 2015). Other risks stem from the overwhelming localization of the industry on Rarotonga, mainly on the southeastern side. For instance, much of Rarotonga's accommodations are on the foreshore and exposed to cyclone risk, and a large cyclone on impacting Rarotonga could devastate the industry. Likewise, Rarotonga's health services would be woefully inadequate to cater for any outbreaks of transmittable diseases, such as the measles outbreak ongoing in Samoa.

Although the growth in tourism arrivals over the last decade has been impressive, this poses higher demands on infrastructure (i.e., roads, power, water and sewage). In particular, localized environmental pressures, if left unmitigated, may tarnish a pristine international tourist brand. This led the government to coordinate with development partners to invest in targeted infrastructure projects to support the sector. For instance, since 2012, government and development partners supported the Te Mato Vai Project, the largest water and sanitation project in the Cook Islands to improve the reticulated water system; and the Mei Te Vai Ki Te Vai Project, which established a central reticulated sanitation system to replace septic tanks.

The strengths and vulnerabilities of the tourism industry discussed herein highlight the importance of investing early in risk management planning and mitigation. In October 2019, the Cook Islands Tourism Corporation (2019) completed a situational analysis and research which identified various types of crisis comprising man-made (e.g., escalated crime), natural hazard (e.g., flood), and health-related (e.g., measles outbreak). Each type of crisis has different levels of intensity with varying degrees of impact on the tourism sector; namely: (i) events that create a shock to the country, (ii) events that would hamper normal operations, and (iii) events that would damage the sector's reputation. Given this, it is vital that the crisis management plan encourages sound monitoring frameworks, the implementation of risk-mitigation strategies, and having standard operating procedures to plan and respond to various types of crises.

Figure 3: Employment Data for Selected Pacific Tourist Destinations



Sources: Secretariat of the Pacific Community, Labor Force Indicators (http://www.spc.int/nmdi/labour_force); and Asian Development Bank estimates.

Looking ahead, the tourism industry will be a continuing source of economic development if the Government of the Cook Islands, private stakeholders, and development partners continue to strengthen the key aspects of infrastructure management (power, water, sanitation, and transport); diversify employment opportunities and use a differentiated approach to preserving the culture; continue to implement strategies for better private sector engagement; and integrate crosscutting issues in all levels of planning, implementation, and evaluation of the industry (Government of Cook Islands 2016b).

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Labor productivity and youth unemployment in Fiji

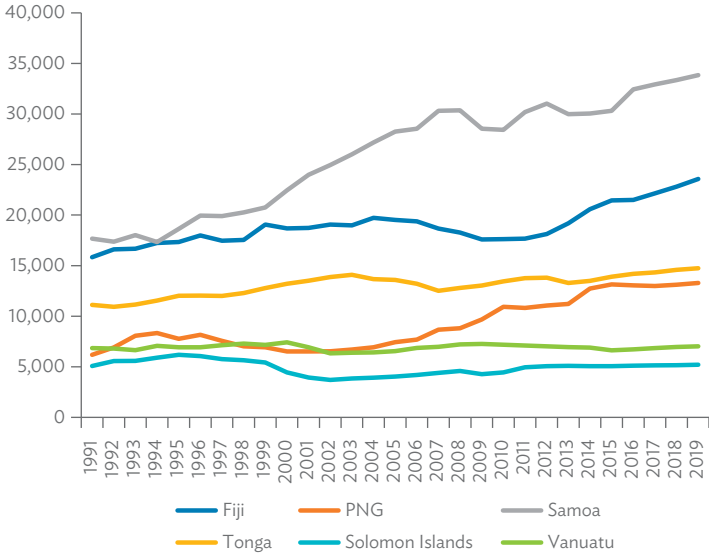
Lead author: Isoa Wainiqolo

Labor productivity is a measure of how well limited labor resources (commonly measured in employment numbers or labor hours) are used to produce output and is a key ingredient for long-term sustainable economic growth. Although Fiji's labor productivity is higher than most Pacific economies, it was generally stagnant from 1990 up to the mid-2010s (Figure 4). Notably, the labor productivity of Samoa and Fiji were generally at par in the early 1990s, but in 2019 Samoa's output per person employed is more than 40% higher than Fiji's.

Fiji launched its National Productivity 15-Year Master Plan 2021–2036 on 13 June 2019. The plan aimed at raising the annual productivity growth to 3.2%, a significant increase from the 1.2% average between 1995 and 2016 (Asian Productivity Organization, 2019, p. VII).[1] The ambitious goal is derived from the Government of Fiji's 20-year development plan 2017–2036, which targeted 4%–5% economic growth a year during this period. At a sector level, this requires lifting the annual productivity growth to 2.6% a year in agriculture (up from -0.2% a year between 2000 and 2016), and 3.3% for the industry and services sectors (up from 0.63% and 0.59% respectively) (Asian Productivity Organization, 2019, p. 15).

The master plan lists 12 strategic thrusts, which include raising productivity of small and medium-sized enterprises, growing the number of competitive large enterprises, transforming state-owned enterprises into high-productivity enterprises, strengthening technology development, and creating a business-friendly environment (Asian Productivity Organization, 2019, pp. 17-18). Strategic Thrust 9 involves building productivity culture and developing future-ready skills, tapping into the demographic dividend and youth unemployment.

Figure 4: Pacific Labor Productivity, 1991–2019
(constant 2011 purchasing power parity, $)



PNG = Papua New Guinea.
Note: Labor productivity measured as gross domestic product per person employed.
Sources: World Bank and International Labour Organization.

YOUTH UNEMPLOYMENT

Fiji has a young population with the median age at 27.5 years in the recent 2017 Census (Fiji Bureau of Statistics, 2018, p. 1), lower than the Asian and Oceania median age of 30.3 years and 32.6 years respectively (United Nations, 2019). Fiji's human development index ranks among the top in the Pacific, and youth literacy grade is only few basis points below maximum possible scores (Table 1), marginally higher than adult literacy rate (World Bank, 2019).

Table 1: Fiji's Literacy Rate

	1996	2017
Adult	92.94	99.08
Youth	99.26	99.74

Note: Literacy rate refers to the percent of people ages 15 years and above for adults and between 15 years and 24 years of age for youths, who can read and write with understanding a short simple statement about their everyday lives.
Sources: World Bank Development Indicators and UNESCO Institute for Statistics.

However, youth unemployment stood at a 18.1% in 2015/16 (Table 2) based on the employment and unemployment surveys; about three times higher than the headline unemployment rate (Fiji Bureau of Statistics and International Labour Organisation, 2018, p. 6). Idle youths or those not in employment, education, and training, a measure of untapped youth potential, is estimated at 19.8% for 2018 (International Labour Organisation, 2019). The not in employment, education, and training rate is three times higher

for female youths at 30.2% than for males. Youths in the Pacific tend to lack work experience and have inadequate skills, while employers offer them limited opportunities for on-the-job training (ADB, Pacific Youth Council and Pacific Community, 2016).

Table 2: Fiji Employment and Unemployment Survey 2015/16 Selected Indicators

	2004/05	2010/11	2015/16	2017
Headline unemployment (%)	5.9	7.1	5.5	4.5
Youth unemployment (%)	15.9	17.9	18.1	...

... = data not available.
Source: Fiji Bureau of Statistics.

OUTLOOK AND POLICY ACTIONS

The International Labour Organization projects that youths will make up 17 in every 100 persons in Fiji in the period 2020–2030. Thus, youth unemployment is likely to continue to be an opportunity foregone.

On a positive note, the National Employment Policy 2018 has prescribed a pathway to address youth unemployment (Ministry of Employment, Productivity and Industrial Relations, 2018) with priority given to enhancing the collaboration between education providers and employers to minimize skills mismatch in the labor force. Industry players have raised the lack of specialized skills in the construction and garment industries as hindrance to their operations which offers an opportunity for youth upskilling.

Youth unemployment can also be reined in through self-employment.[2] Fiji has a Youth Entrepreneurship Scheme, which provides financial assistance in the form of grants to youths who have innovative and bankable projects but need collateral support. Awardees are provided with business training and mentorship (Ministry of Industry, Trade and Tourism, 2019). The government has allocated a further F$0.5 million towards the scheme in its recent fiscal year 2019–2020 national budget with awardees receiving up to F$30,000 grant. However, this allocation may need to be reviewed, given the size of untapped labor in Fiji.

The National Productivity Plan requires a 'high growth strategy' to achieve the government's 20-year development targets. Unwavering political will is a prerequisite. The National Training and Productivity Centre in Fiji, the sole body responsible for productivity in Fiji, needs to be appropriately resourced to drive this mandate. The successful Fiji Business Excellence Awards framework, where the private sector and government departments aim to benchmark its processes with best international practices, should be further encouraged. The government has taken steps towards resolving the structural impediments identified in the annual World Bank's Ease of Doing Business survey.

While Fiji has enjoyed 9-consecutive years of economic growth, the challenge now is sustaining the reform momentum, raising productivity to raise economic growth rates, and diversifying sources of growth.

Endnotes

[1] The Government of Fiji joined the Asian Productivity Organization (APO) in 1984, an intergovernmental organization committed to raising productivity in the Asia and Pacific region. Fiji is one of APO's four member countries who are categorized as upper middle-income countries and is the only member from the Pacific (Asian Productivity Organization, 2019, p. VII).

[2] As per International Classification of Status in Employment (ICSE), Employment includes wage & salary workers, employers, own account workers (self-employed) and contributing family workers (home employment without a pay) (Fiji Bureau of Statistics and International Labour Organization, 2018, p. 11).

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Too much of a good thing: Fishing revenues in Kiribati and Tuvalu

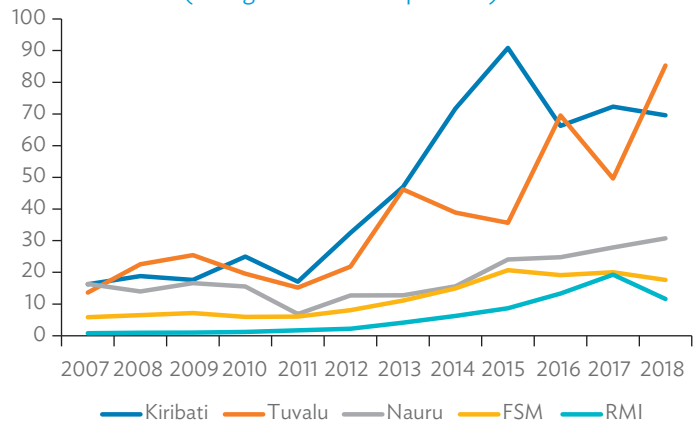
Lead authors: Noel Del Castillo and Lily Anne Homasi

Kiribati and Tuvalu are small island economies that have depended heavily on imports to maintain their standards of living. These imports have been funded by trust fund revenues, development assistance, and, particularly in recent years, by fishing license revenues. The volatility of government revenues from fishing licenses amid growing demands for better services and public infrastructure, threatens fiscal sustainability. and is not only a risk but a significant challenge that would benefit from a closer look.

From 2007 to 2018, the average share of fishing license revenues for Kiribati and Tuvalu was equivalent to 45.4% of GDP and 37.0% of GDP respectively. This is the highest among the Parties to the Nauru Agreement (PNA) Pacific developing member countries (DMCs) that also includes the Federated States of Micronesia, the Marshall Islands, Nauru, Palau, Papua New Guinea, and Solomon Islands.

In 2011, Kiribati and Tuvalu, as members of the PNA with support from Forum Fisheries Agency, successfully negotiated fishing day prices offered under the vessel day scheme (VDS). The price was revised from $5,000 per day in 2011 to $6,000 in 2013 and to $8,000 in 2015. This resulted in sharp increases in fishing revenues as a percentage of GDP starting with the full implementation of the VDS in 2012 (Figure 5). This source of revenue has become an important determinant of the fiscal positions of Kiribati and Tuvalu.

Figure 5: Fishing License Revenues of Select Pacific Economies
(% of gross domestic product)

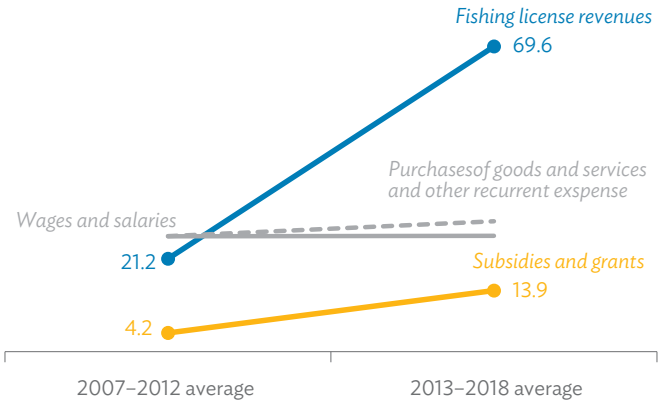


FSM = Federated States of Micronesia, RMI = Republic of Marshall Islands.
Sources: Budget documents of FSM, Kiribati, Nauru, RMI, and Tuvalu; and Asian Development Bank.

During the period 2012–2018, the Kiribati economy enjoyed a sustained period of growth, averaging about 3.9%. This was driven largely by public spending on infrastructure projects, which were funded mainly by development partners and receipts from the sale of fishing licenses. In 2018, fishing license revenue was 71.7% of total revenue, the single largest source of revenue for the government.

Kiribati has the largest exclusive economic zone in the Pacific, and the catch in Kiribati's zone accounted for one quarter of the global total for tuna species. Its fishing license revenues were equivalent to 69.6% of GDP in 2018. A portion of these revenues was contributed to the government's sovereign wealth fund—the Revenue Equalization Reserve Fund (RERF). Despite economic downturns in the past, the RERF continued to grow, aided by higher fishing receipts.

Figure 6: Kiribati: Average Size of Fishing Revenue and Recurrent Spending
(% of gross domestic product)



Sources: Budget documents for Kiribati and Asian Development Bank estimates.

Prior to the VDS, the average fishing license revenue was equivalent to 21.2% of GDP compared with 69.6% of GDP, post-PNA VDS (Figure 6). Rising vessel day prices under the VDS saw Kiribati collecting $161.8 million (90.8% of GDP) in 2015 compared with $30 million (17% of GDP) in 2011. From 2012 to 2015, growth in fishing revenue enabled the government to contribute to the Revenue Equalization Revenue Fund, which grew from $614 million in 2012 to $764 million (A$994 million) in 2018, slightly short of its $770 million (A$1 billion) target, which was achieved in late 2019. Also, cash reserves increased from $15.4 million in 2016 to $130.7 million in 2018.

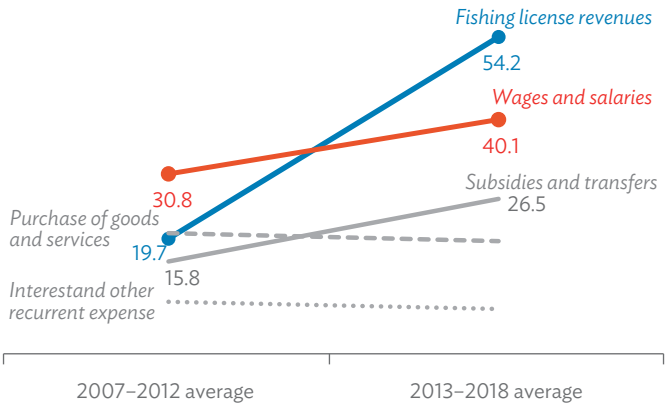
However, spending also grew with subsidies on copra doubled from $0.77 per kilogram to $1.54 per kilogram in 2018. The program provides a form of social welfare to remote communities. This decision increased the government spending from $6.1 million to $24.6 million a year, making it the largest single program for the government. In 2018, increases in government wages and salaries also saw a 30% increase in government spending.

While fishing revenues has improved the fiscal situation, government's attempts to utilize this source of income to improve health outcomes, through better water and sanitation services has been mixed and is yet to translate to improvements in social indicators for Kiribati. According to the Secretariat of the Pacific Community National Minimum Development Indicators, in 2015, Kiribati's population with access to safe drinking water was 64.4% compared with the Pacific DMCs average of 88.6%. In terms of

access to sanitation, only 39.8% of the population had access compared with the subregional average of 71.0% (ADB 2018).

Also, the issue of building buffers is critical for fiscal sustainability and better utilization of large fishing revenue receipts. Although the Government of Kiribati has been able to increase cash reserves with a relatively healthy sovereign wealth fund balance of $770 million, this could be depleted should the government continue to accelerate recurrent spending and large capital projects. Hence, other alternative means of mobilizing revenue are essential. For instance, the government has been able to increase taxation from the equivalent of 15.2% of GDP in 2012 to 17.7% of GDP in 2018. But the scope for further increases is limited and, therefore, caution is needed to minimize risks associated with cost blowouts allowed for by fishing revenues and reinforces the need for a risk management framework to implement measures that support a sound fiscal framework. This is in line with the 2018 International Monetary Fund (IMF) Article IV recommendation calling for reinforcement of the fiscal framework where the IMF recommended that the government focus on controllable aspects of the budget in its medium-term planning and improve transparency in the management of fishing license revenues.

Figure 7: Tuvalu: Average Size of Fishing Revenue and Recurrent Spending
(% of gross domestic product)



Sources: Budget documents of Tuvalu and Asian Development Bank estimates.

Likewise, Tuvalu's fishing revenues, relative to GDP, is second only to Kiribati among Pacific DMCs. From the equivalent of 19.7% of GDP in 2007–2012, fishing license revenues rose to 54.2% of GDP in 2013–2018 (Figure 7). Its participation in the PNA has not only raised its fishing revenues significantly, but has also slightly reduced its volatility. In 2018, Tuvalu's fishing revenues skyrocketed to 85.3% of its GDP because of a one-off payment that it received from a separate subregional pooling scheme with four other Pacific island economies. The unexpected spike boosted its fiscal position and resulted in a current account surplus. The steady growth of Tuvalu's fishing revenues has supported higher wages for the public sector, as well as increased, subsidies and transfers. Average spending on wages and salaries, relative to GDP, increased by 9.3 percentage points between 2007–2012 and 2013–2018. On the other hand, subsidies and transfers have risen by 10.7 percentage points over the same period, with the overseas medical referral scheme and scholarships being the main contributors.

Tuvalu's economy remains highly susceptible to fluctuations in fishing revenues which are affected by weather patterns related to the El Niño cycle. Based on the risk assessment performed by the IMF in 2018, changing weather conditions that will lead to a higher-than-projected decline in fishing revenues have a medium likelihood of occurrence. This will result in downward pressure on both the country's fiscal and external balance. The adverse impact of a fishing revenue shock will be high as it can lead to fiscal tightening, which will reduce potential growth, impede development, and deplete the country's fiscal buffers. In an alternative scenario that the fishing revenue declines sharply between 2028 and 2032 because of changes in weather patterns, the IMF estimates that the collapse of the fishing revenues could lead to a fiscal deficit equivalent to 15.0% of GDP in 2037 from a fiscal surplus equivalent to 33.9% of GDP in 2018. This would increase the present value of Tuvalu's debt-to-GDP ratio and breach its debt threshold by 2032, which is about 5 years earlier than the baseline scenario (under status quo condition) predicts.

In summary, Kiribati and Tuvalu continue to be vulnerable to shocks, including climate change and fiscal risks because of increased public spending and heavy reliance on volatile fishing license revenues. The approaches taken by the governments of Kiribati and Tuvalu on the utilization of their respective fishing license revenues also means that targeted measures will need to be put in place to safeguard this essential revenue source through improvements in the transparency of the management of exclusive economic zone and fishing revenue in Kiribati and Tuvalu. Also, these measures should boost not only economic growth but also social development outcomes that are meant to support the most vulnerable in these nations.

With both economies highly vulnerable to uncertainties in fishing license revenue, it is vital for Kiribati and Tuvalu to strengthen their fiscal frameworks and maintain sufficient buffers. In the short to medium term, the governments should look at ways to diversify and increase other sources of revenue. Eliminating tax exemptions and broadening tax bases can increase internal revenue. Meanwhile, economic diversification should involve partnership with the private sector as most of the country's economic activity is shaped by agriculture and fishing. Private sector participation would require the governments, in the medium to long term, to provide and upgrade the necessary infrastructure to create a conducive environment for expansion and growth of productive sectors, including potentially a niche tourism industry. Over time, this would reduce the dependence of Kiribati and Tuvalu on a single industry; improve the sustainability of their trust funds; and help their economies to better manage its exposure to macroeconomic volatilities.

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Managing unconventional revenue streams

Lead authors: Jacqueline Connell, Prince Cruz, Rommel Rabanal, and Cara Tinio

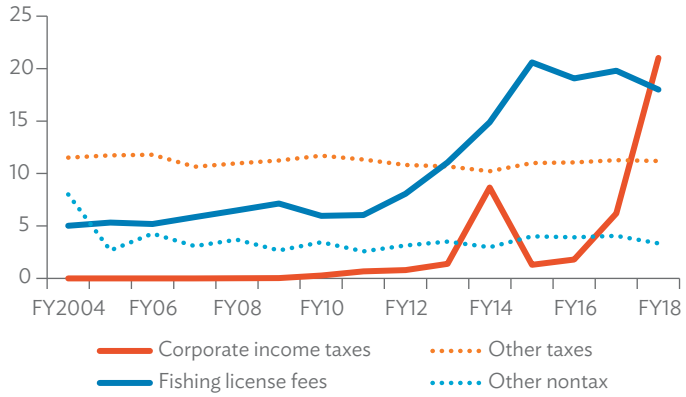
With their narrow economic bases, small island developing states (SIDS) struggle to mobilize enough public revenues to support operations of government systems and adequately finance their development needs. To address persistent revenue shortfalls, some SIDS have cultivated unconventional sources of income. For example, corporate income taxes from companies domiciled in the Federated States of Micronesia, ship registry revenues in the Marshall Islands, and honorary citizenship programs in Vanuatu. Maximizing the benefits and reducing the risks of unconventional or volatile revenue streams requires careful fiscal management, with some SIDS, such as FSM and Nauru, choosing to channel higher revenues into trust funds.

FEDERATED STATES OF MICRONESIA

A 2005 corporate income tax law that allowed for the creation of a domicile in the FSM for companies operating overseas, followed by succeeding insurance legislation in 2006, created an attractive opportunity for foreign insurance companies. In particular, for captive insurance companies—subsidiaries that provide commercial insurance and business risk mitigation services for their parent companies and affiliates—of firms in Japan. These companies were able to reduce their effective corporate income tax from upwards of 40% in Japan (30% after recent tax reforms), to 21% in the FSM. A few overseas investment companies have also incorporated in the FSM since the enactment of the corporate income tax legislation.

Revenue from corporate income taxation began in FY2008 (ended 30 September 2008 for both the FSM and the Marshall Islands) and averaged only $1.1 million, or equivalent to 0.4% of GDP, over the first 5 years of collection. Since then, collections have skyrocketed, averaging $24.9 million per annum during FY2013–FY2018, the equivalent of 6.7% of GDP (Figure 8). This includes unusually large receipts—driven by windfall capital gains of domiciled companies—totaling $27.6 million (equivalent to 8.7% of GDP) in FY2014; $22.7 million (6.2%) in FY2017; and $84.5 million (21.0%) in FY2018. In early FY2019, corporate income tax collections already reached $48 million with receipt of another large payment. Swift legislation of tax transparency and information regulations reversed earlier issues of noncompliance with international standards. The FSM has been designated as "largely compliant" by the Global Forum on Transparency and Exchange of Information for Tax Purposes.

Figure 8: Large Corporate Income Tax Receipts in the Federated States of Micronesia in Recent Years
(% of gross domestic product)



FY = fiscal year.
Source: Federated States of Micronesia Fiscal Year 2018 Statistical Appendices.

Although recent large collections provide a welcome boost to the FSM's fiscal coffers, the periodic nature of large one-off payments leads to high volatility in year-to-year collections, and can provide the impetus for increasing public expenditure in years when collections are much higher than anticipated During FY2009–FY2018, corporate income tax collections, by far, were the most volatile source of government revenue, with a coefficient of variation—the ratio of the standard deviation to the mean—of 1.7, indicating high variance.

As with other income streams subject to large fluctuations, the utilization of corporate income tax collections can be smoothed by depositing higher revenues collected in years with large one-off payments into trust funds, for future drawdown during lean periods. Indeed, the national government recently adopted a policy of depositing 50% of annual corporate income tax revenues into the FSM Trust Fund. A follow-on policy likewise to deposit 20% of fishing license revenues, which have been boosted by a regional vessel day scheme for collecting fees from foreign fishing fleets, is now also in place. Refinements to the allocation formula, including possibly specifying a more dynamic and conservative fiscal rule that maximizes deposits while allowing for productive fiscal stimuli,

would further promote sustainability and help control fluctuations in public spending. Given the public sector's outsize impact on the FSM's economic performance, a smoother public expenditure path, in turn, will contribute to curbing boom-and-bust cycles in GDP growth as well.

MARSHALL ISLANDS

The Marshall Islands' ship registry is an example of an open registry that allows the registration of foreign-owned vessels (as opposed to a traditional one that is only for ships owned and operated by nationals of that country). Ship owners choose a "flag state" based on factors such as regulatory environment, taxes, and quality of service offered by the registry (including safety records and presence in major ports). A registered vessel becomes subject to the laws of its flag state, which assumes responsibility—including ensuring safety at sea and compliance with international standards—for all vessels carrying its flag.

Over the past 3 decades, the Marshall Islands' registry grew from 39 vessels with a capacity of about 2 million gross tons to 4,627 vessels and almost 170 million gross tons (Figure 9), making the country one of the world's leading flag states.

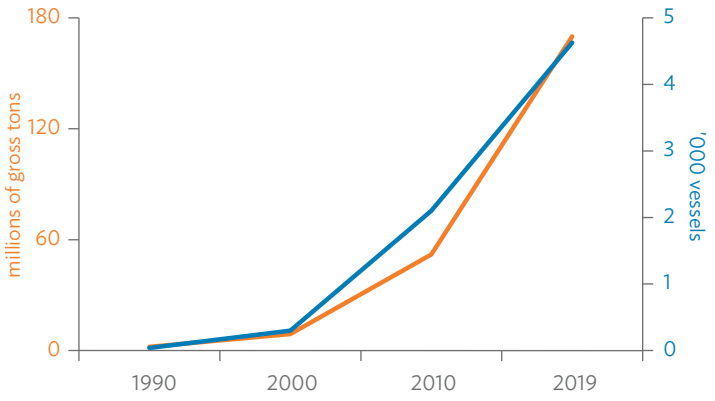
Like many other ship registries, the Marshall Islands' registry is managed abroad; the United States-based International Registries, Inc. operates the country's maritime as well as corporate registries through a wholly owned subsidiary, and every year a portion of its earnings goes to the Government of the Marshall Islands. The amount sent to the government has risen from $1.0 million (equivalent to 0.7% of GDP) in FY2005 to $7.3 million (3.3% of GDP) in FY2018, declining only in FY2010 following the global financial and economic crisis (Figure 10). However, revenues from fishing license fees have overtaken those from ship registry fees, especially since the regional VDS was implemented in 2012.

The government expects ship registry revenues to stay at about $7 million in the near term. Besides being an active member of the International Maritime Organization, the country enjoys "white list" status with the Paris and Tokyo memorandums of understanding, which seek to harmonize and uphold shipping standards, and has met the United States Coast Guard's ship safety requirements for 15 consecutive years. Many newly built vessels have been choosing to register with the Marshall Islands.

The Marshall Islands ship registry is encouraging the registration of vessels certified by Green Award, a voluntary international scheme, as meeting standards that exceed industry regulations on safety, quality, and environmental performance. Aside from aligning with the country's drive to adapt to climate change, this move also anticipates the International Maritime Organization's cap on sulfur emissions from ships, which takes effect in 2020.

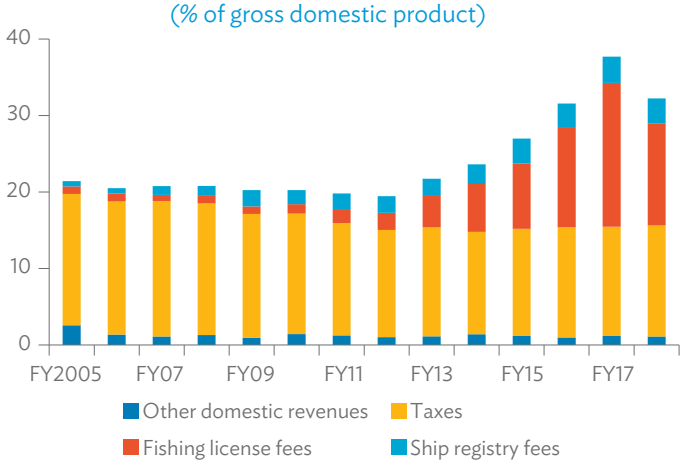
Although ship registry revenues account for a small share of domestic revenues compared with taxes and revenues from fishing license fees, domestic revenue collections, in general, will grow in importance unless the Marshall Islands' Compact of Free Association with the United States is renewed before it and the attendant grants expire in 2023. In FY2018, these accounted for 28.9% of total grants and were equivalent to 18.1% of GDP. Maintaining contributions to the Marshall Islands' Compact Trust Fund, which is envisioned to offset the coming loss of the Compact grants remains of paramount importance. Together with state-owned enterprise reforms and other measures to manage public finances, this would help stabilize fiscal resources and public spending on essential services and growth-generating investment projects, even during leaner periods.

Figure 9: Significant Rise in Vessels Flying the Marshall Islands Flag



Note: 2019 figure is as of 30 September.
Source: International Registries, Inc.

Figure 10: Revenues from Ship Registry Fees Remain a Small Share of Domestic Revenue Collections in the Marshall Islands
(% of gross domestic product)

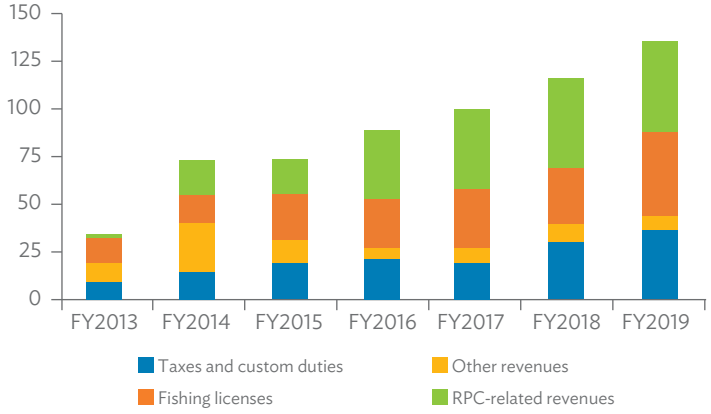


FY = fiscal year.
Source: Marshall Islands Fiscal Year 2018 Statistical Appendices.

NAURU

As a remote and isolated island economy, the Government of Nauru has few revenue sources. The reopening of the Nauru Regional Processing Centre for asylum seekers and refugees in 2012 provided about 40% of domestic revenues (i.e., excluding grants) from fiscal year (FY, ended 30 June) 2016 to FY2019. These revenues include direct payments and visa fees for asylum seekers and refugees. The indirect revenue contribution of the Nauru Regional Processing Centre, through increased customs duties and taxes, is also substantial (Figure 11). The government's other main source of revenue comes from issuing fishing licenses for access to Nauru's territorial waters. However, fishing license fees, which accounted for about 30% of domestic revenue from FY2016 to FY2019, can be difficult to predict from year to year and depend on continued regional fisheries cooperation.

Figure 11: Unconventional Revenues Account for the Bulk of Domestic Revenues in Nauru
(% of gross domestic product)



FY = fiscal year, RPC = regional processing center.
Note: FY2013–FY2016 based on audited financial statements, FY2017–FY2019 based on actual from outturn reports.
Source: Asian Development Bank estimates using Nauru budget papers (various years).

To develop a future stable source of budget financing, the government established the Intergenerational Trust Fund for the People of the Republic of Nauru (referred to as the Nauru Trust Fund) with development partner support in 2015. The government makes annual contributions to the Nauru Trust Fund guided by a targeted percentage of domestic revenue, at a progressively rising rate. Since its establishment, the government has saved about 10% of domestic revenue in the Nauru Trust Fund. Development partners have also contributed.

The Nauru Trust Fund provides a long-term investment vehicle that enables the government to pursue financial returns hopefully to replace unsustainable sources of revenue. The objective of the Nauru Trust Fund is to build a sufficiently large principal value that can provide a future stream of budget financing. The investment strategy of the Nauru Trust Fund is bound by certain restrictions and principles to protect its financial integrity, and professional fund management is outsourced. The Nauru Trust Fund is designed to be perpetual, and withdrawals are not intended during the initial build-up phase, during which a principal value of A$400 million is targeted (ADB 2016). Once the Nauru Trust Fund enters a distribution phase, annual budget financing will be made available from the Trust Fund's income streams, but these will be capped to preserve the value of the fund in real terms.

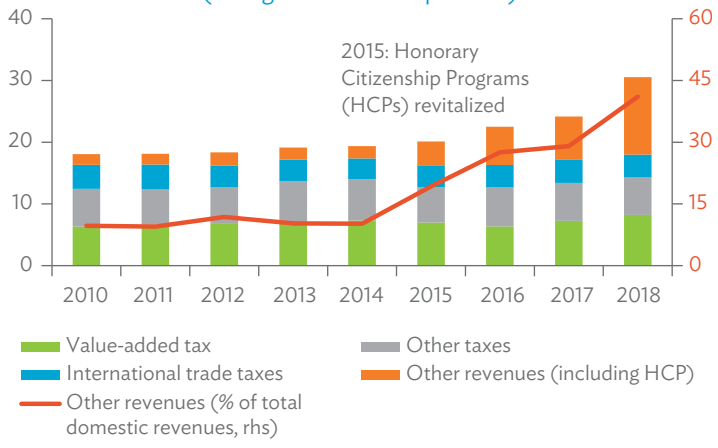
Improving budget prioritization and reducing non-priority spending would enable Nauru to contribute more to the Nauru Trust Fund, while revenues remain high, increasing the prospects that it can provide a future, stable source of budget financing. Improving the quality and efficiency of public spending is also critical to create fiscal space to ensure that government contributions to the Nauru Trust Fund can continue even if government revenues fall over time, as expected, from reduced Nauru Regional Processing Centre activity.

VANUATU

The government of Vanuatu, which first operated secondary passport programs in the 1990s, revived honorary citizenship programs (HCPs) to help finance rehabilitation efforts following Cyclone Pam in 2015. The HCPs include the Vanuatu Development Support Program, the Vanuatu Contribution Program, and the Real Estate Option Program.

In 2018, income from HCPs, which the government classifies under "other revenues," became the biggest source of domestic revenues (i.e., excluding grants). Other revenues accounted for more than 40% of domestic revenues in 2018, a jump from 29% in 2017 (Figure 12). This pushed the value-added tax collections to second place despite an increase in the value-added tax rate.

Figure 12: "Other Revenues" Now Account for the Largest Share of Domestic Revenues in Vanuatu
(% of gross domestic product)

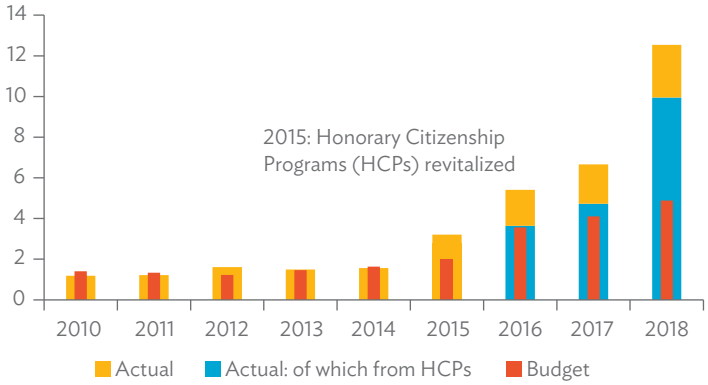


rhs = right-hand scale.
Source: Vanuatu Ministry of Finance and Treasury budget documents, various years.

Revenues from the HCPs contributed to a large fiscal surplus in 2018, reversing the small deficit in 2017, despite large spending on infrastructure. The surplus was used to make early debt repayments (equivalent to 3.3% of GDP), and finance disaster relief in response to the volcanic eruption on Ambae.

Although strong HCP revenues have improved Vanuatu's fiscal position, they also expose the country to volatility as external factors affect their stability as a source of income. Since 2015, "other revenues" have consistently overshot the initial estimates indicated in the government budget. In 2018, actual collections from "other revenues" were almost three times the budget, mainly because of the HCPs (Figure 13). Continuing to project revenue conservatively, combined with directing windfall revenue to reducing public debt and building fiscal buffers against shocks such as disasters, will help to manage the fiscal challenges created by volatile HCP revenue. Developing and implementing a medium-term expenditure plan will also strengthen fiscal discipline and overall budget management. The government recently launched a review of HCPs which is intended to guide future policy.

Figure 13: Collections of "Other Revenues" Have Exceeded Initial Budget Estimates in Vanuatu
(Vt billion)



Note: Data not available on actual revenues from HCPs prior to 2016.
Source: Vanuatu Ministry of Finance and Treasury budget documents, various years; International Monetary Fund (IMF). 2019. 2019 Article IV Consultation. IMF Country Report No. 19/162. Washington, D.C.

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Improving the business environment in Palau

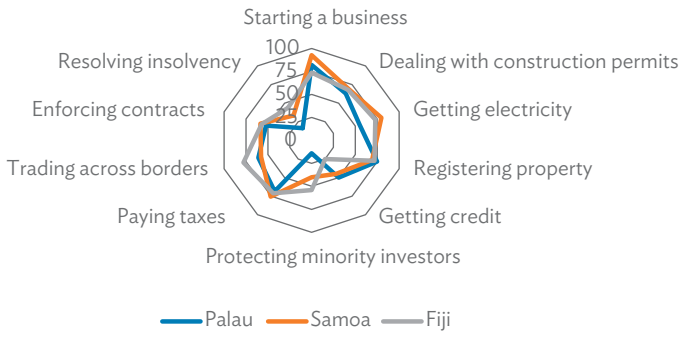
Lead author: Rommel Rabanal

The private sector accounts for about 45% of the annual economic output in Palau, dominated by hotel and resort operators, restaurants, retail shops, and other businesses linked to the vital tourism sector. Although Palau's private sector is among the largest—in proportion to the size of the economy—in the Pacific, substantial room for improvement remains in the current quality of its business environment. According to World Bank's *Doing Business 2020*, Palau ranks 145th out of 190 economies surveyed, or at the bottom quartile of business enabling environments globally. Palau's ranking has slipped gradually in recent years, with scores across *Doing Business'* 10 key areas largely remaining stagnant since 2016, indicating a paucity of reforms related to private sector development.

Benchmarking Palau's current scores with those of the two best-performing Pacific economies—Samoa (ranked 98th) and Fiji (102nd)—offers some insight on specific areas for reform and improvement (Figure 14). Relative to these comparators, Palau rankings are particularly lower in three indicators: (i) protecting minority investors, (ii) resolving insolvency, and (iii) getting electricity.

Addressing weaknesses in the first two areas will require reforms to expand and complete legal frameworks for corporations. In the area of protecting minority investors, for example, policies to ensure full disclosure of directors' potential conflicts of interest; shareholders' participation in electing and dismissing an external auditor; and possible avenues for minority shareholders to sue and hold interested directors liable for prejudicial-related-party transactions are missing currently. Similarly, no explicit measures are in place to disallow preferential or undervalued transactions in Palau's insolvency framework at present. Closing these gaps

Figure 14: Doing Business 2020 Rankings, Select Pacific Economies



Source: World Bank. 2019. *Doing Business 2020: Comparing Business Regulation in 190 Economies.* Washington, DC.

in the legal framework, as demonstrated in comparator Pacific economies, can help reduce uncertainties and risks for potential private investors.

Palau's low ranking in the getting electricity indicator reflects both the long time it takes for a business to acquire a new permanent connection—125 days as opposed to an average of 63 days for East Asia and Pacific—as well as the poor quality of electricity services. These reflect longstanding inefficiencies in the operations of the Palau Public Utilities Corporation (PPUC), a state-owned enterprise providing electricity, water supply, and sanitation services. Currently, there is no independent regulator in place to monitor PPUC's performance, resulting in Palau rating significantly much poorer than comparators in the reliability of electricity supply as measured, for example, by average service interruption frequencies and durations.

From a broader perspective, improving the performance of utilities perhaps is the key to unlocking further private sector development in Palau. Reform is underway in PPUC to move toward full cost-recovery tariffs, particularly in water supply and sanitation services, and eliminate the need for subsidies and incentivize improvements in operational efficiency and services delivery.

Further, establishing an independent regulator—not only for electricity but also for other utilities, including those providing information and communication technology services—will help promote a level playing field that should encourage expanded private investment and induce better service quality and pricing for customers.

Exploring public–private partnerships to increase renewable energy generation capacity, and stimulating market competition in retail information and communication technology services, can also help reduce tariffs and expand access to underserved areas over the longer term. In turn, improved access to and quality of basic services can underpin steady increases in broader business activity that should help revitalize Palau's economy and reduce its exposure to volatilities stemming from international travel and tourism trends.

Examining recent fiscal adjustments in Papua New Guinea

Lead authors: Edward Faber, Magdelyn Kuari, and Abhimanyu Dadu

In October 2019, the Government of Papua New Guinea passed a supplementary budget that projects a fiscal deficit of 4.1% of gross domestic product (GDP), compared with the 2.1% of GDP projected in the 2019 national budget and associated Medium Term Fiscal Strategy. The government also revised its Fiscal Responsibility Act to allow debt to reach up to 45% of GDP.

The increase in the fiscal deficit was a result of a significant reduction in revenue projections for 2019 and additional expenditure incurred, which would have been far greater had significant cuts not been made. This article explores in more detail the adjustments made in the 2019 supplementary budget. The article also briefly examines the 2020 budget, which was released just prior to this publication going press.

REVENUE

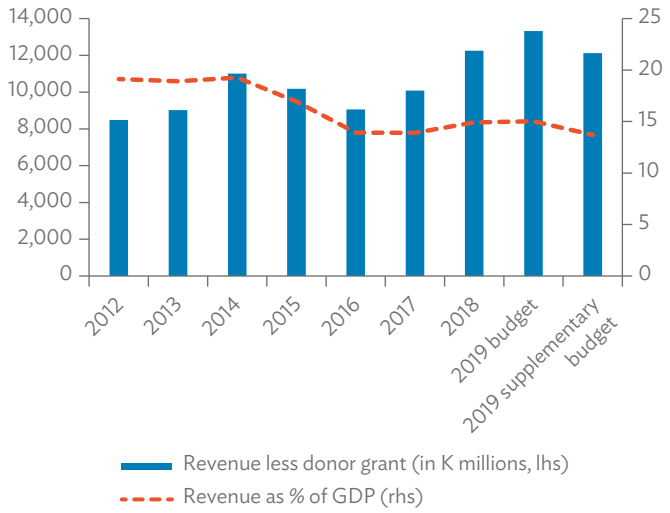
The original 2019 budget forecast revenues of K14.3 billion (equivalent to 16.1% of GDP), marginally higher than 2018 actual revenue (K14.1 billion). The 2019 supplementary budget reduced the forecast to K13.1 billion (14.8% of GDP). Compared to the 2018 revenue outcome, this is a 7.2% fall. Drivers for this change are broad-based, including lower-than-expected corporate income tax, personal income tax, goods and services tax, mining and petroleum tax, and other revenue, including dividends from state-owned enterprises and transfers from statutory authorities. In 2018, a year in which revenue increased by 22%, corporate tax and goods and services tax collections were buoyed by stimulus related to the hosting of the Asia–Pacific Economic Cooperation Summit; mining and petroleum tax collection was pushed higher by a rising oil price; and other revenue benefited from better dividend flow from state-owned enterprises and transfers from statutory authorities. Compared with the 2017 revenue outcome of K11.5 billion, the 2019 supplementary budget expectation is still 13.4% higher in nominal terms, although in real terms the increase is only about 2.6%. Loss of business confidence because of political instability, delays to commencement of new large gas and mineral projects, and continued misalignment in the exchange rate and associated unavailability of foreign currency are also important factors behind the weak revenue trend.

EXPENDITURE

The 2019 supplementary budget increased the expenditure envelope to K16.5 billion (equivalent to 18.7% of GDP), higher than the original 2019 budget. While the overall net increase was K352 million, this was arrived at after significant adjustments: budget cuts totaling K1.5 billion (equivalent to 1.7% of GDP) against overruns and reappropriations totaling K1.9 billion (2.1% of GDP). Without the budget cuts, the fiscal deficit would have reached close to 6% of GDP.

Overruns and reappropriations. A significant part of the overruns came from the public sector wage bill. Under the 2019 supplementary

Figure 15: Government Revenues in Papua New Guinea



GDP = gross domestic product, lhs = left-hand scale, rhs = right-hand scale.
Source: Papua New Guinea national budget documents (various years).

Box 1: Papua New Guinea 2019 Supplementary Budget Upward Adjustments

Expenditure overrun and upward adjustments of K1,874 million:

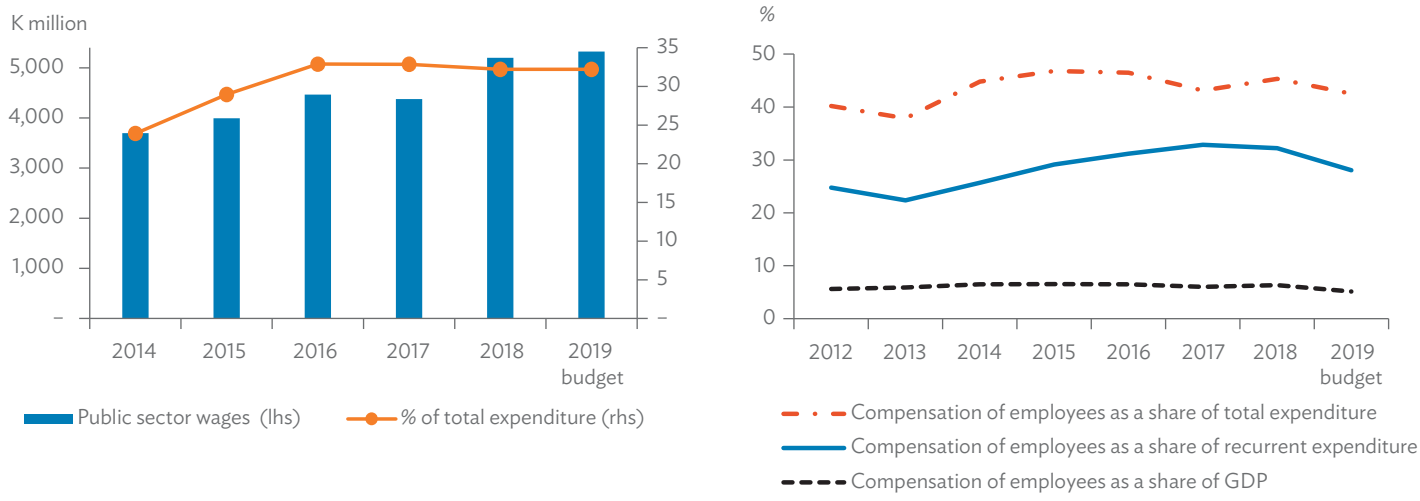
- Personnel emoluments (K856.5 million)
- Overruns in goods and services, specifically rentals and utilities for 2019 (K74.8 million)
- K521 million to pay arrears in contractual capital investments (estimated at K321 million) and rentals and utilities (K200 million) from past years
- K100 million directed to the Department of Commerce and Industry for economic projects for 2019
- K50 million directed at the Department of Works for the payment of missing links roads project
- K50 million reappropriated for Bougainville Infrastructure Project
- K100 million for Disaster Funds
- K122.4 million for interest payment overruns

Source: 2019 Supplementary Budget Bill, Department of Treasury, Government of Papua New Guinea.

budget, the public sector wage bill is now projected at K5.3 billion, K856.5 million higher than originally budgeted (K4.5 billion). This significant overrun is partly because of weak payroll management, but it is also because of unrealistic budgeting. In fact, the new figure used in the supplementary budget is only 0.2% higher than the 2018 actual payroll expenditure of K5.2 billion. The expectations to cut the payroll may have been tied to the belief that the payroll would reduce after the Asia–Pacific Economic Cooperation Summit, which had contributed to the increase in 2018. However, compared with 2017 (K4.4 billion), there is still a significant increase; the 2019 payroll is 13.3% higher in nominal terms than in 2017. In recent years, the payroll has been affected by the continued hiring of teachers, health workers, transport sector workers, and police. In 2019, there was also a backdated 3% pay rise. A buildup of retirees continues to affect the payroll: these are public sector workers who should be retired, but remain on the payroll awaiting severance pay. The annual average rate of increase of the public sector wage bill, after inflation, has been 5.2% in the 5 years between 2013 and 2018.

Expenditure cuts. To accommodate the increased expenditure, significant cuts were made, split across the operational budget

Figure 16: Public Sector Wage Bill in Papua New Guinea



GDP = gross domestic product, K = Papua New Guinea kina, lhs = left-hand scale, rhs = right-hand scale.
Source: Papua New Guinea national budget documents (various years).

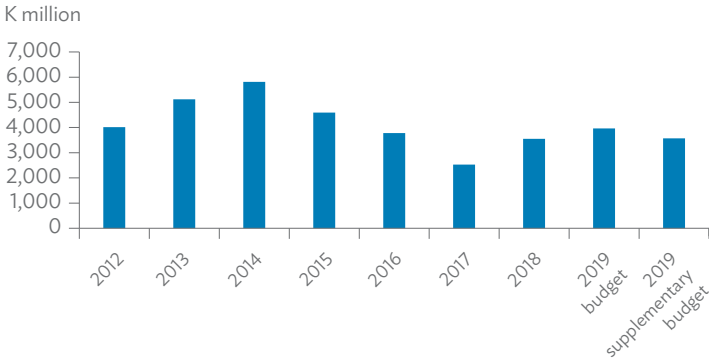
(K400 million) and the capital budget (K1 billion). The cuts to the operational budget were made to goods and services and affected multiple departments, although the departments of health and education were ringfenced. The largest cuts were felt by Treasury and Finance (K112.0 million), Judiciary Services (K38.3 million), Provincial and Local Government Affairs (K24.8 million), the Department of Defense (K23.0 million), the Department of Police (K15.1 million), the Department of the Prime Minister (K13.8 million), and the Internal Revenue Commission (K13.7 million). Lack of detailed data and changing reporting formats make it challenging to assess how significant these cuts are compared with prior years. While the overall effect of these cuts on growth may be limited, there will be an effect on services delivery.

The cuts to the capital budget are detailed in Box 2. The most significant cuts included those to the District and Provincial Service Improvement Programs (SIPs) and Ward SIPs, the latter of which were cut out altogether. While reduction in the SIPs can have political ramifications, because parliamentary members use these to boost investment in provinces and districts, a 25% cut is unlikely to cause too much resentment, especially considering that cuts were uniform across all districts and provinces. The 100% cut seen to Ward SIPs was also seen in 2018 and 2017, and many rural wards see very little development spending.

Budget cuts for educational and higher educational projects, and health and hospital management services were both about two-thirds from the original budget. While this is significant and stalls advancement in these sectors, it should also be considered that the original budget targets for capital expenditure may have been ambitious. Government cash flow restraints are a key reason for why these projects did not get moving in 2019, and so have been shelved as part of the supplementary process.

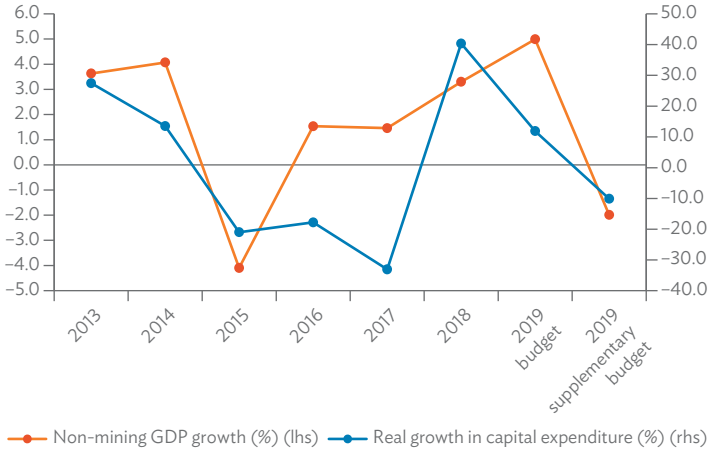
Even though the capital budget saw cuts of K1 billion because of some other capital budget reappropriations (Box 1), the final adjustment to the capital budget was a K561 million reduction. Therefore, the final capital budget allocation for 2019 is expected to

Figure 17: Papua New Guinea Real Capital Expenditure
(constant 2013 prices)



Source: Papua New Guinea national budget documents (various years).

Figure 18: Papua New Guinea Real GDP growth and capital expenditure



GDP = gross domestic product, lhs = left-hand scale, rhs = right-hand scale.
Source: Papua New Guinea national budget documents (various years).

Box 2: Papua New Guinea 2019 Supplementary Budget Major Cuts

- K222 million for Provincial and District Services Improvement Programs (cut by 25%)
- K64 million for Ward Service Improvement Program (cut by 100%)
- K104.7 million for projects under the Department of National Planning and Monitoring (including K50 million from Infrastructure Development Grants and K17 million from the state equity fund to boost agriculture and other sectors)
- Education projects and programs totalling K99.3 million
- Small and medium-sized enterprises funding for agricultural and nonagricultural activities, K86 million
- K84.6 million for health (35% for rehabilitation/upgrading and new developments of infrastructure in the health sector)
- Program under provincial and local government affairs, K56 million inclusive of K20 million under district town development program.
- Security and defence totalling K53.8 million for police, defence, and correctional service projects and programs
- Programs in the transport sector reduced by total K30.5 million
- New State Land Acquisition Program budget slashed by K14 million
- Programs/projects in coffee sector reduced by K9.5 million, projects and programs in cocoa and oil palm sector reduced by K13 million in total, and rehabilitation and maintenance of rural airstrip and rural electrification slashed by K8 million, respectively.

Source: 2019 Supplementary Budget Bill, Department of Treasury, Government of Papua New Guinea.

be about K4.9 billion, equivalent to 5.6% of GDP. Importantly, this is still 5.7% higher than in 2018 (K4.7 billion) and 55.8% above 2017 (K3.2 billion), which was another year in which the capital budget faced significant downward adjustments. However, the 2019 figure is still below the outturns in 2013–2015. Sustained capital expenditure by the government is key for supporting economic growth.

FINANCING AND DEBT

The wider projected fiscal deficit requires additional financing of K1.6 billion. This is expected to be secured externally from bilateral and multilateral partners. Including contingent liabilities (1.7% of GDP), which were previously not included, the end-of-year debt stock is estimated to reach close to 40% of GDP. This is above the 35% debt ceiling set out in the Fiscal Responsibility Act, which has necessitated an amendment to the act.

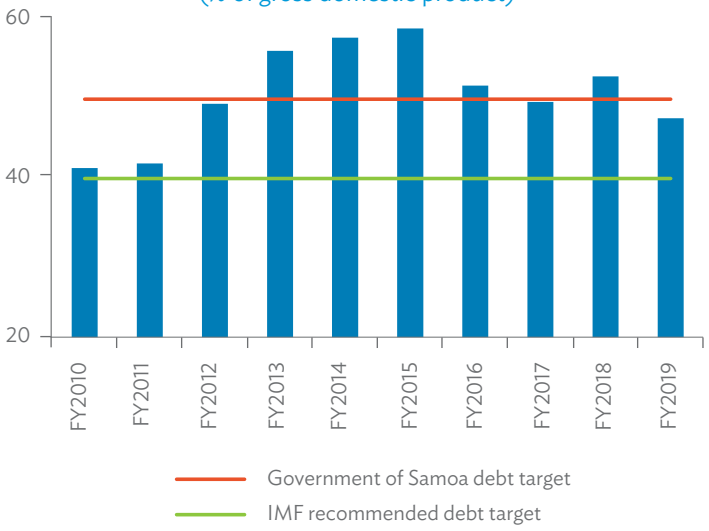
FISCAL RESPONSIBILITY ACT AND FISCAL STRATEGY

The Fiscal Responsibility Act was amended as part of the supplementary budget to allow the debt-to-GDP ratio to reach 45% of GDP until 2024, 40% until 2029, and 35% thereafter. The current threshold is 35% of GDP, so the amendment allows for significant expansion. The logic behind the amendment is to allow for contingent liabilities to be absorbed into the debt ratio, to accommodate and clean up payment arrears and to allow for other adjustments, while at the same time permitting sufficient capital expenditure.

2020 BUDGET

The 2020 budget was released as this edition of the Pacific Economic Monitor was being finalized. The 2020 budget projects an expansionary fiscal policy, with the deficit seen to expand to 5.0% of GDP. Revenues are forecast at K14.1 billion (15.3% of GDP) and expenditure is forecast at K18.7 billion (20.3% of GDP). The wider deficit is driven by (i) growth in the capital budget of 18.8% and growth in the operational budget of 10.9%; (ii) a cleaning up of arrears, equivalent to 1.2% of GDP (iii) a continued poor revenue trend, projected to grow by 8.2%. Although the 5.0% deficit reflects a significant departure from the existing fiscal consolidation strategy, it comes in the context of a new Medium Term Fiscal Strategy (MTFS) that the new government hopes will have IMF endorsement and backing. Although the wider deficit will push the debt to GDP ratio to an expected 40.3% of GDP by the end of 2020, some of the debt will come with better terms, and, should the IMF give its endorsement, PNG will need to commit to restricting expansion of its operational expenditures, including the public sector wage bill.

Figure 19: Samoa Total Government Debt
(% of gross domestic product)



FY = fiscal year, IMF = International Monetary Fund.
Source: Government of Samoa, Ministry of Finance. 2019. *Quarterly Debt Bulletin*. Apia (June).

(Re)building resilience: restoring Samoa's ability to respond

Lead author: James Webb

Samoa suffered significant economic and human losses from a series of disasters just a decade ago: an earthquake and tsunami in 2009, which resulted in 143 lives lost, displaced about 2.5% of the population, and caused an estimated 20% of gross domestic product (GDP) in damages; and Cyclone Evan in 2012, which resulted in 14 lives lost and $204 million in damages, or about 30% of GDP. As a result of the immediate loss of lives and livelihoods, significant public resources were diverted towards reconstruction efforts in the years that followed.

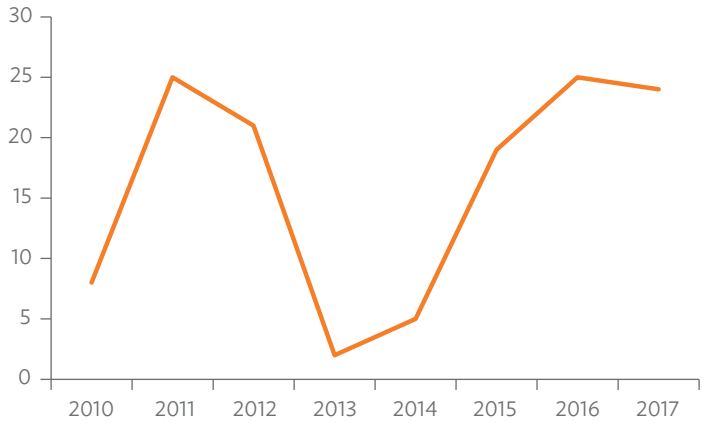
In terms of government expenditure following the twin disasters, the Government of Samoa invested in a series of large construction projects funded through foreign loans and grants. From an average of $29.6 million in capital spending between fiscal year (FY)2007 and FY2009, total government spending on fixed assets increased from an average of $41.1 million in the 3 years following the tsunami (FY2010–FY2012), to an average of $52.2 million a year in the aftermath of cyclone Evan (FY2013–FY2015). The 2 years immediately following cyclone Evan were particularly significant: FY2013 at $59.5 million and FY2014 at $62.8 million.

This reconstruction spending increased public debt from 41.3% of GDP in FY2010 to a peak of 58.9% of GDP by FY2015, well in excess of the government's 50% debt target (Figure 19).

With government fiscal consolidation from FY2016, improved operational balances reduced government debt to 47.6% of GDP by the end of FY2019. This was further complemented by the Asian Development Bank (ADB) and the World Bank in again recognizing Samoa as a grant-only recipient in 2018, reducing pressure for loan-financed development spending and alleviating debt distress. However, Samoa's debt-to-GDP ratio still sits higher than the 41.9% it experienced prior to the 2009 tsunami and well above the International Monetary Fund's recommended 40% ceiling.

Other government agencies, such as the Development Bank of Samoa (DBS), are also yet to recover, with the quality of the DBS balance sheet declining markedly in the wake of the twin disasters. The DBS is a publicly owned development bank, which provides credit financing to enable sustainable and socially inclusive development. In the past, the DBS has been called on to extend credit to the private sectors affected by disasters to accelerate recovery efforts (for example: tourism accommodation following Cyclone Evan). About 68% of its loan portfolio in 2017 was composed of concessional credit and covered by government guarantees. The rate of nonperforming loans (NPLs) climbed dramatically in 2011 and again in 2014 (Figure 20), about 2 years after each disaster (ADB 2019b). In 2011–2013, the DBS balance sheet recovered relatively quickly, but the NPLs following cyclone Evan have not returned to pre-disaster levels, with the value of NPLs representing almost one-quarter of the total loan portfolio by 2017. Much of this decline was because of NPLs in the tourism sector. With such a high level of NPLs, it seems unlikely that the DBS could be called on in future disasters without presenting significant risks to the government's own balance sheet and/or the sustainability of the DBS.

Figure 20: Development Bank of Samoa Nonperforming Loans
(% value of total portfolio)



Source: ADB. 2019. *Finding Balance 2019, Benchmarking the Performance of State-Owned Banks in the Pacific.* Manila (August).

The Pacific Catastrophe Risk Assessment and Financing Initiative (PCRAFI) is a parametric insurance facility which provides rapid disbursement in the event of disasters that reach a certain magnitude. The 2011 PCRAFI risk assessment notes that, in the next 50 years, there is a 40% chance of a natural hazard event (earthquake and tsunami, or cyclone) causing damages equivalent to 27% of GDP and an additional $35.1 million (15.7% of government expenditures) in emergency costs. Over the next 25 years, these figures are 19.4% of GDP and 11.2% of government expenditure. With climate change potentially increasing the intensity of cyclones, aggregate indicators could suggest that Samoa is at a financial disadvantage should another major natural hazard event occur in the next few years.

With an average annual loss of 1.7% of GDP estimated by PCRAFI (2017), reducing the long-term debt target to 40% would contribute to ensuring that any future reconstruction efforts would not come at the sacrifice of existing development priorities. The International Monetary Fund (2019) recommends that this target be achieved by limiting the fiscal deficit to 1% of GDP when not in recession or recovering from a disaster, and imposing a general deficit ceiling of 2% of GDP.

However, fiscal aggregates do not present a complete picture of Samoa's financial resources in the event of a major disaster.

As before Cyclone Evan in 2012, the reallocation of development partner programs towards immediate recovery and reconstruction efforts is a common feature of disaster response. The government has similar provisions within its own resources, as well as a 3% expenditure contingency for unforeseen expenditure and disaster response within the current-year budget. However, the terms of these financing options are largely unchanged since 2012 (for example, the 3% contingency spending would still need to be financed from government revenues, reserves, or credit, as it was in 2012).

Aside from the reallocation of existing commitments within Samoa's ADB country programs in the event of a disaster, the reclassification of Samoa as an ADB grant-only country enables grant based access to disaster risk financing (DRF). Piloted from 2013, ADB DRF enables access of up to 100% of the annual country program ($17 million in 2019) in disaster reconstruction assistance without the need to reallocate funding from existing projects. The Samoa Renewable Energy Development and Power Sector Rehabilitation Project is an example of a DRF-financed project in 2013. A similar level of funding is available from the World Bank. Crucially, the recent increase in grant allocations in both institutions have resulted in significantly higher resources being available to Samoa than in 2012 and, since 2018, neither institution would add to Samoa's debt burden.

In terms of rapidly disbursing contingent financing, Samoa became a pilot member of the PCRAFI insurance facility in 2013. The annual insurance premium for PCRAFI was initially funded by Japan, and then by the World Bank with later contributions from the government. Further complementing these actions, Samoa has also taken part in the ADB Pacific Disaster Resilience Program since 2017, which supports policy actions in disaster risk management and provides $6 million of contingent financing for timely disaster response, early recovery, and reconstruction activities (ADB 2019a). Similarly, the World Bank can provide up $8.7 million as a Catastrophe-Deferred Drawdown Option ("Cat DDO") for quick-disbursing finance in the immediate aftermath of a disaster. These mechanisms are in addition to other rapid-response initiatives, such as the Asia–Pacific Disaster Response Fund, which provides fast-tracked grants of up to $3 million to any ADB developing member country for life-saving purposes in the immediate aftermath of a major disaster (Samoa accessed this facility in both 2009 and 2012).

Together, these financing tools will enable Samoa to respond to a disaster without resorting to debt financing in the first instance, ensuring that the government should be at least as well placed to respond to disasters as it was during previous crises. These should

be complemented with efforts to address the outstanding NPLs at the DBS and encouraging private sector growth to ensure that financial resilience extends beyond the public sector.

However, it should be noted that the improved public financial resilience will continue to be dwarfed by the human and financial impacts of major disasters. According to the PCRAFI, from tropical cyclones, earthquakes, and tsunamis alone, probable maximum losses are $109.8 million, $152.9 million, and $266.1 million from 1-in-50, 1-in-100, and 1-in-250 year events respectively.

Additional to financial instruments, other disaster risk management practices will need to work in tandem to ensure that both financial and nonfinancial practices mitigate disaster impacts on communities, the economy, and the government. For example, the Enhancing Safety, Security, and Sustainability of Apia Port Project, which will rehabilitate and upgrade the port facilities to withstand a 100-year storm event and 50-year sea-level rise. Supported by an ADB $62.3 million grant, a multi-hazard disaster preparedness plan will also be formulated to mitigate disruption of port operations in the aftermath of a disaster event. This highlights that there are still numerous areas of engagement to reduce disaster risk as a way of reducing the human and financial costs in the event of a disaster. Some interventions will target specific infrastructure assets, but other formal and informal institutions may also need to be improved in order to build greater preparedness.

Disasters of the magnitude of the 2009 tsunami and Cyclone Evan will always present a significant strain on national resources, but the combination of the right financial and nonfinancial tools will help mitigate the impacts of, and recovery from, any future disasters.

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Multi-partner approach to development in Solomon Islands

Lead authors: Jacqueline Connell and Prince Cruz

Solomon Islands has one of the lowest incomes per person among Pacific DMCs at about $1,800 in 2018. The archipelago, with a population of roughly 660,000, faces several development challenges. Aside from the threat of disasters, such as cyclones and earthquakes, there is low access to water and sanitation services, and power supply, while the transport network is limited. The economy also has a narrow base. Logging and development partner-financed infrastructure projects were the main drivers of growth in 2018. With rising concerns over the sustainability of logging, new sources of growth and employment are needed.

Borrowing to finance all of Solomon Island's development needs would likely push the country into significant debt. From the equivalent of more than 70% of GDP in 2003, public debt of Solomon Islands was reduced to 8% of GDP in 2016, mainly because of debt forgiveness and improved fiscal management implemented in cooperation with development partners (ADB 2018b). The same bilateral and multilateral partners are now joining with new partners to help finance large development projects, mainly using concessional loans and grants.

Although the multi-partner approach requires extensive, often lengthy, coordination, it can deliver important benefits in Pacific economies. It can help the country to mobilize a broader range of financial resources (including from the private sector); minimize the country's debt exposure to a single lender; and when development partners adopt joint processes and a sector approach, it can reduce the transaction costs for the government.

The combined resources that multi-partner approaches bring can enable large-scale development projects that require a minimum scale to be efficient to go ahead. This is particularly beneficial in Pacific countries that face diseconomies of scale because of their small size, and high cost structures because of their remote locations. The coordination that multi-partner approaches entail can also enable more integrated sector planning. A climate- and weather-proof integrated transport system including ports, roads, and bridges can be built, for instance, instead of small segments of roads that may be cheaper but easily can be swept away by one cyclone. Two projects that have adopted a multi-partner approach are highlighted here focusing on clean energy, and water and sanitation in Solomon Islands.

TINA RIVER HYDROPOWER PROJECT

The electrification rate in Solomon Islands was relatively low at about 6% in 2009 (the latest available census). Even in the capital, Honiara, the electrification rate was only 67%, mainly supplied through the grid by the state-owned Solomon Power (ADB 2018a). The Tina River Hydropower Project aims to increase the generation of renewable energy on the Honiara grid and reduce the cost of power supply. To achieve this, a 15-megawatt hydropower plant will be developed on the Tina River, just outside Honiara. The entire project is expected to cost $233 million, equivalent to 18% of GDP, including the construction of access roads and transmission lines.

The project will be the largest public–private partnership ever developed in Solomon Islands. A consortium of two companies from the Republic of Korea, with known track records in the hydropower sector, will build, own, operate, and manage the hydropower plant under a build-operate-own-transfer scheme. Equity from the consortium accounts for 4.6% of total financing (Figure 21). The Government of Solomon Islands will finance the construction of transmission lines that accounts for 7.3% of financing. The remaining financing is a mix of concessional loans (67%) and grants (21%) from the Green Climate Fund, the Export–Import Bank of Korea–Economic Development Cooperation Fund, the World Bank, ADB, the Abu Dhabi Development Fund, and the Government of Australia. While the project has taken many years to prepare, the multi-partner approach has enabled a larger, more transformational project than would otherwise have been possible.

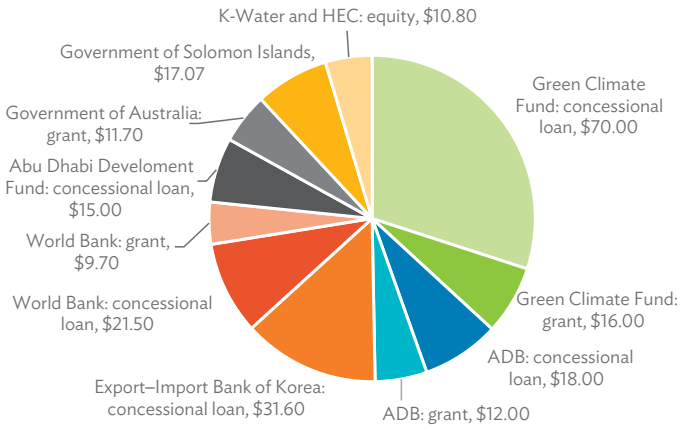
URBAN WATER SUPPLY AND SANITATION SECTOR PROJECT

Although water and sanitation services are better in the Greater Honiara Area, which extends from the capital to its environs, compared with the rest of the country, only 60% of households has access to public water supply system while 75% has access to basic sanitation. The country lacks sewage treatment facilities, and many of the ocean outfalls have broken above the shoreline, which leads to raw sewage being discharged to beaches and rivers (ADB 2017, 2019).

To address this, the government is implementing the Urban Water Supply and Sanitation Sector Project, which will provide better access to safe water and improve sanitation in urban areas of Solomon Islands. The project adopts an integrated sector approach and includes the construction of new infrastructure (including water reservoirs, pipes, and sewage facilities); rehabilitation of existing infrastructure; education programs to raise awareness of water conservation and hygiene practices; and capacity building and institutional strengthening to ensure that the state-owned Solomon Islands Water Authority (SIWA) is financially and operationally sustainable to deliver urban water and sewage services.

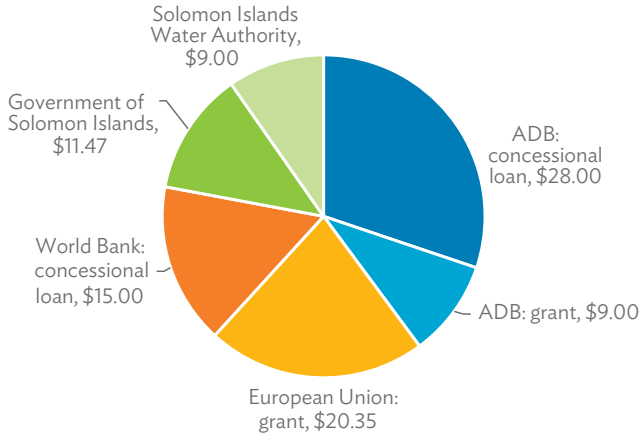
The project, which is expected to cost $93 million, equivalent to about 7% of GDP, leverages support from three development partners through a combination of concessional loans (46%) and grants (32%) (Figure 22). SIWA is financing 9% of the project, while the government is expected to include tax and custom duty exemptions.

Figure 21: Tina River Hydropower Project
(total financing: $233.37 million)
($ million)



ADB = Asian Development Bank, K-Water = Korea Water Resources Corporation, HEC = Hyundai Engineering Corporation Limited.
Source: ADB. 2019. *Report and Recommendation of the President to the Board of Directors: Proposed Loan and Grant to Solomon Islands for the Tina River Hydropower Project.* Manila (Project Number: 50240-001, September).

Figure 22: Urban Water Supply and Sanitation Project
(total financing: $92.82 million)
($ million)



ADB = Asian Development Bank.
Source: ADB. 2019. Report and Recommendation of the President: Proposed Loan and Grant to Solomon Islands for the Urban Water Supply and Sanitation Project. Manila (Project Number: 51271-001, September).

Development partners have agreed to apply a single procurement framework, which should improve efficiency and lessen the burden on SIWA. This contrasts with many other development projects that have traditionally used multiple procurement frameworks on a single project. The project is guided by the government's Water and Sanitation Sector Plan, but ensuring country ownership and leadership throughout the project will be critical, underscoring the importance of continued institutional strengthening in SIWA.

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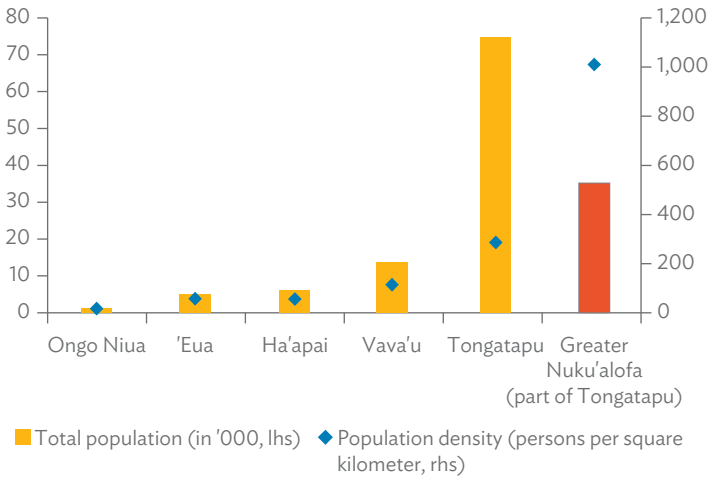
Figure 23: Population and Population Density across Tonga



lhs = left-hand scale, rhs = right-hand scale.
Source: Tonga 2016 Census of Population and Housing.

Addressing problems of urbanization in Tonga

Lead author: Noel Del Castillo

Aside from the many challenges typically faced by small island developing states, Tonga is also facing urbanization problems related to heavy migration to the capital. These problems can pose risks to the long-term sustainability of Tonga's urban areas and threaten Tongans' way of life.

Fewer than one third of Tonga's approximately 170 islands are inhabited and nearly three quarters of its population of 100,651 reside in the main island of Tongatapu where Tonga's capital, Nuku'alofa, is located (Figure 23). The greater Nuku'alofa area is composed of 6,134 households with a total population of 35,184, and this is expected to grow to 45,000 (or about 40% of Tonga's population) by 2030. A push from limited opportunities in smaller communities, combined with the pull of vital infrastructure availability in urban areas has driven many Tongans to continue moving to urban and peri-urban settlements in low-lying coastal areas. This is particularly true in the case of Nuku'alofa where migration from the outer islands to the capital is significant.

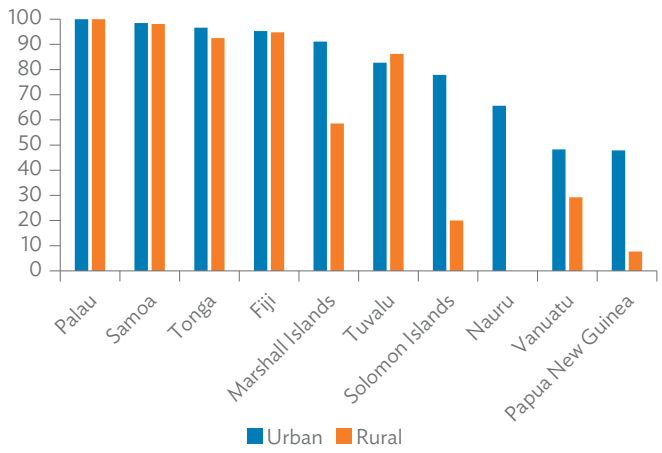
Although urban growth in Tonga is a relatively recent phenomenon, it is becoming a major concern. With the population of Nuku'alofa growing much more quickly than the national average (Government of Tonga 2012), demand for improved urban infrastructure is increasing. In most cases, this growth has not been matched by the provision of, or improvement in, the delivery of urban services, resulting in the deterioration of living conditions of many residents in the capital. It has put pressure on the availability of urban land. Agricultural, as well as ecologically sensitive, areas on the outlying areas of Nuku'alofa inhibit further land expansion for urban use, placing development pressure on existing marginal areas. Some of these areas experience frequent coastal flooding.

Poorer communities that usually live in flood-prone areas suffer more from waterborne diseases, particularly dengue and malaria. Waterlogging with poor sanitation also increases the incidence of typhoid fever, diarrhea, and skin diseases. In the long-term, rising sea levels will lead to permanent seawater flooding in low-lying areas. This is already observed in the low-lying districts of Popua and Sopu, which are inundated during spring tides and storm surges. Flood control will be problematic as the flat terrain of Nuku'alofa limits engineering options to mitigate flooding. In areas where trunk channels might be effective, mitigating flooding beyond once-in-2-year frequency would require significantly wider channels, but the unavailability of land to accommodate wider channel systems raises additional challenges.

Increased migration to urban areas has also posed problems for solid waste management. With urban population growing at an average of up to 2.5% per year in some areas in Tongatapu, increasing demand for collection and disposal services is putting a strain on the Waste Authority Limited, the state-owned enterprise in-charge of waste management in the main island. The expansion of Waste Authority Limited's operation to cover the outer islands in the succeeding years will also place extra demand on the only available safe disposal facility so far. Based on current demand figures, the landfill cell is expected to reach its maximum capacity by 2023. Immediate solutions and long-term programs must be put in place.

Although most Tongans have better access to basic sanitation compared with other Pacific islanders (Figure 24), there are still serious sanitation issues that need to be addressed, particularly in

Figure 24: Access to Basic Sanitation, 2017
(% of population)



Source: World Development Indicators.

high-density areas. In the absence of centralized sewerage systems in Tonga, most households use septic tanks for the temporary storage of septage. In the past, septic tanks were desludged only when full or overflowing, making them a major source of contaminants in aquifers in the Nuku'alofa area. Increased public awareness has led to an increase in septage cleaning and collection by septic tank desludge trucks. However, the septage sludge treatment facility in Tapuhia can only treat up to 74% of the household and commercial septage in the capital (ADB 2019). Population pressure will further weaken the capacity of the treatment facility, requiring the need for additional facilities to allow regular desludging of all septic tanks and to treat the landfill leachate.

Tonga's vulnerability to climate change has also increased its susceptibility to flooding and potable water supply problems. Rain-fed floods have affected Nuku'alofa's urban area more than any other type of natural hazards in terms of frequency and number of people impacted (ADB 2019). In the event of a disaster, hundreds of households are relocated to community evacuation centers as their houses are submerged in flood. As the frequency and intensity of extreme rainfall events increase because of climate change, Nuku'alofa's flooding problems will likely worsen if no significant measures are taken. Extreme weather disturbances can also lead to long periods of dry season, which can have serious impact on the supply of potable water. One scenario estimates that the average duration and frequency of droughts in Tongatapu would increase substantially (ADB 2019). This will adversely affect the availability of the water resource in Nuku'alofa, which is already beset with problems on water pressure and service interruptions. Although potable water supply coverage in Nuku'alofa area reached 100% in 2015, nonrevenue water (mostly in the form of pipe leaks) is estimated to account for 45% of total water supplied. In the face of continuous migration and threat of dry spells, repairs must be quickly put in place to better manage water resources.

Recognizing the importance of addressing urban-related problems, the government has identified these issues as priority projects in the National Infrastructure Investment Plan and the Strategic Development Framework. At least two of the priority projects laid out in the first plan address solid waste management and coastal protection, which have a total project cost of $11.0 million. Meanwhile, the second plan looks at the organizational strategy needed to achieve listed development outcomes, which includes improved land use planning and management, waste recycling, and resilience to disasters.

Likewise, ADB is working with the Government of Tonga to upgrade urban services and infrastructure in Nuku'alofa. It recently extended a grant to Tonga under the Integrated Urban Resilience Sector Project, which will improve flood management infrastructure, enhance water supply service, upgrade solid waste and sanitation management and facilities, and prepare a long-term urban development strategy and investment plan for the greater Nuku'alofa area. This will help Tongans respond to the urgent urban-related problems and formulate long-term strategies to ensure the resiliency and sustainability of urban areas.

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Addressing the needs of small island developing states

Small island developing states (SIDS) face structural constraints arising from their small size, remote location, geographic dispersion, narrow asset bases, and exposure to disasters and climate change impacts. They are also usually characterized by their thin capacity to carry out basic government functions and provide social and infrastructure services, small taxation bases, reliance on external revenue sources (including development assistance), dependence on imports (alongside low levels of exports), limited private sector opportunities, and high investment costs. Resilience to manage and mitigate risks is low, and the SIDS are susceptible to external shocks. These factors lead to secondary development challenges, including low formal sector employment, urbanization pressures, and limited economic engagement of women. Although extreme poverty is rare, large segments of the population are susceptible to shocks in prices or supplies of subsistence produce, resulting in episodes of hardship.

Heterogeneity among small island developing states

Although the SIDS[1] that are members of the Asian Development Bank (ADB) have several challenges in common, they are not a homogenous group. They range in size from small islands with populations below 20,000 (Cook Islands, Nauru, Palau, and Tuvalu) to Papua New Guinea (PNG), which has more than 9 million inhabitants. While the Federated States of Micronesia (FSM), Kiribati, PNG, Samoa, Solomon Islands, Timor-Leste, and Vanuatu are lower middle-income economies, Fiji, the Marshall Islands, Maldives, Nauru, Palau, Tonga, and Tuvalu are considered upper-middle-income economies based on nominal per capita gross national income (GNI). Only the Cook Islands is classified as high-income. The degree of constraints, the risks and threats, and the potential opportunities are different for each of the SIDS.

Based on their broad economic structures and population size, the SIDS can be divided into three subgroups:

(i) **Larger resource exporters.** PNG, Solomon Islands, and Timor-Leste are three of the four largest ADB SIDS by population. Substantial agricultural and mineral resources have allowed for export-based generation of foreign exchange incomes. Their ratios of export receipts to gross domestic product (GDP) range from 40% to 50%.

(ii) **Tourism-based economies.** The Cook Islands, Fiji, Maldives, Palau, Samoa, and Vanuatu have populations ranging from about 17,400 in the Cook Islands to more than 880,000 in Fiji. Destination development has allowed these SIDS to derive significant foreign exchange income from inbound tourism. Their ratios of tourism receipts to GDP range from about 20% in Samoa to almost 50% in the Cook Islands. This subgroup demonstrates that tourism can be a driver of growth at various stages of development.

(iii) **Smaller islands and atolls.** The FSM, Kiribati, the Marshall Islands, Nauru, Tonga, and Tuvalu are among the smaller SIDS, with populations ranging from about 11,500 (Tuvalu) to just over 110,000 (FSM and Kiribati). With the narrowest resource bases and the most acute challenges in terms of geographic remoteness and dispersion, these economies require heavier development assistance. Annual receipts of official development assistance account for more than 20% of GDP and can exceed 60% in the smallest economies.

This grouping is not deterministic or exclusive as they share common characteristics. Also, it is possible for some SIDS to transition from one subgroup to another; for example, some small islands and atolls can conceivably become tourism-based economies in the future.

Structural challenges

Although stylized facts on constraints to inclusive and sustainable growth among SIDS commonly first focus on their physical or geographic challenges, the complex interplay among these factors manifests in two primary structural challenges: (i) elevated cost structures, and (ii) heightened economic vulnerability.

Elevated cost structures. Small markets translate into diseconomies of scale and limited competition, both of which result in elevated prices for locally produced goods, while high transport costs raise the prices of imported commodities. Diseconomies of scale in production, limited competition, and remoteness raise the costs and the risk of doing business and delivering services. Although nominal per capita incomes may appear to be substantial, the narrow economic bases are insufficient to cover the minimum cost of running a government, particularly when high costs of service delivery are exacerbated by geographic dispersion and remoteness. This generally means that living costs in the SIDS are significantly higher than in the non-SIDS.

Higher living costs in the SIDS can be illustrated using purchasing power parity (PPP)-adjusted GNI. Although each of the 15 ADB SIDS is classified as at least a lower middle-income country based on nominal GNI per capita, high cost structures restrict purchasing power. When comparing the 40 ADB DMCs by nominal per capita GNI, the SIDS tend to rank better than the non-SIDS. However, PPP adjustment leads to lower ranks compared with nominal GNI rankings for the SIDS (except for Timor-Leste), in sharp contrast to the non-SIDS—all but two of which (Armenia and the People's Republic of China) improve their rankings on a PPP-adjusted basis—reflecting lower living costs compared with the SIDS (Figure 1). On average, nominal GNI per capita for the 15 ADB SIDS is more than 72% higher than that of the 25 non-SIDS, but PPP-adjusted GNI per capita among the 15 SIDS is about 15% lower than that of the 25 non-SIDS. This illustrates higher cost structures in the SIDS

than in the non-SIDS. Notably, the smaller islands and atolls and the tourism-based economies have more elevated cost structures than the larger resource exporters.

Heightened economic vulnerability. The SIDS are highly vulnerable, not only to impacts of climate change and disasters caused by natural events, but also because of their narrow economic and revenue bases. These structural impediments are captured by the broad concept of economic vulnerability, which reflects the risk that a country's development will be hampered by natural or external shocks.

Among existing indicators, the United Nations economic vulnerability index (EVI) may be the most comprehensive attempt to measure vulnerability based on physical and structural factors (Feindouno and Goujon 2016). The EVI measures economic vulnerability on a scale of 0–100 (a high index indicating elevated vulnerability), based on a simple average of two subindexes:

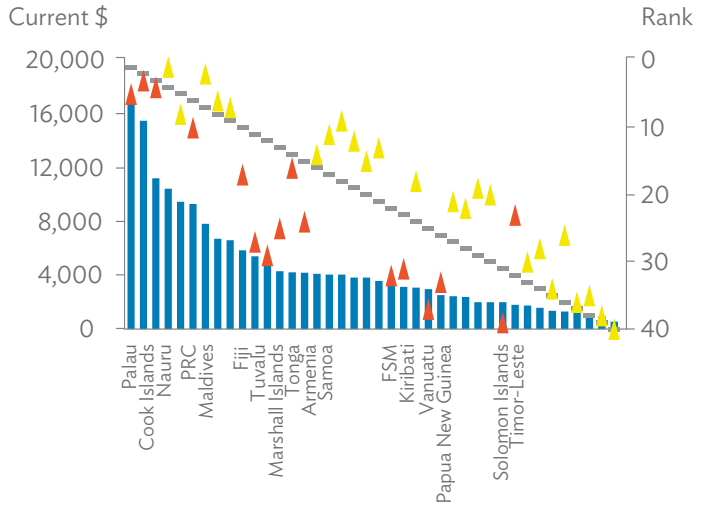
(i) the exposure subindex, which is a weighted average of five component indexes: population size (25.0%); remoteness from world markets (25.0%); exports concentration (12.5%); share of agriculture, forestry, and fishery in GDP (12.5%); and share of population living in a low elevated coastal zone (25.0%); and

(ii) the shocks subindex, which is a weighted average of three component indexes: victims of natural disasters (25%), instability in agricultural production (25%), and instability in exports of goods and services (50%).

As of 2018, 8 of the top 10 economies with the highest EVI scores globally are SIDS (Figure 2). Further, the average EVI among the ADB SIDS is 55.7—almost double the 28.6 average of the non-SIDS DMCs—highlighting heightened vulnerabilities. Among the SIDS, narrow economic bases and exposure to climate change impacts are reflected in an average EVI of 61.4 for the smaller islands and atolls, the highest among the three subgroups. The tourism-based economies are exposed to volatilities in international travel trends, and this is reflected in an average EVI of 53.7, close to the average for all SIDS. However, given their relatively larger economic bases, the resource exporters are somewhat less vulnerable than the other SIDS with an average EVI of 48.4, although still well above the average for the non-SIDS.

The vulnerability of the SIDS is reflected in their volatile macroeconomic performance. Large year-to-year swings in business cycles are common, stemming not only from external shocks but also domestic factors such as the schedule and pace of large public infrastructure construction in the context of small economies. During 2009–2018, the coefficient of variation—or the ratio of the standard deviation to the mean—in real GDP growth exceeded 1.0 in 10 of the 15 SIDS, indicating high variance. Reflecting their relatively lower vulnerability, the larger resource exporters tend to experience the smallest variations in macroeconomic performance, with an average coefficient of variation in real GDP growth of 0.8. However, the corresponding coefficient of variation, at least, is double in the tourism-based economies (1.6) and the smaller islands and atolls (1.7), indicating severe volatility. Exposure to natural hazards and shocks is exacerbated by shifts in visitor arrivals and expenditure patterns in the tourism-based economies, and by variations in public spending or one-off domestic factors in the smaller islands and atolls.

Figure 1: Income per Capita: Nominal versus PPP-Adjusted Rankings, 2018



FSM = Federated States of Micronesia, GNI = gross national income, PPP = purchasing power parity, rhs = right-hand scale.
Note: A lower number denotes a higher (better) ranking on the right-hand side axis. Red triangles indicate small island developing states (SIDS). Yellow for non-SIDS.
Source: World Bank World Development Indicators online database.

Figure 2: Economic Vulnerability Index, 2018

FSM = Federated States of Micronesia.
Note: The economic vulnerability index for the Cook Islands is approximated using available ADB data. Red bar indicates small island developing states (SIDS). The chart shows the top 25 most economically vulnerable countries globally.
Sources: Asian Development Bank and United Nations Department of Economic and Social Affairs.

Fiscal constraints

The combination of narrow economic bases and high costs of service delivery generally mean that the SIDS lack adequate revenue sources to meet their financing needs. However, the SIDS have been making good progress in improving own-revenue mobilization despite the myriad challenges they face. The median ratio of tax to GDP among the SIDS improved to 19.3% during 2012–2017, from 17.6% in the preceding 6 years. Overall, the SIDS have outperformed their non-SIDS counterparts in mobilizing tax revenues during 2008–2017, but their economic bases are not large enough to generate revenues to fully finance their priority spending needs. Further, nontax revenues are becoming increasingly significant, particularly for the smaller islands and atolls. The full implementation in 2012 of a vessel-day scheme for collecting license fees from foreign fishing fleets, for example, has been a game-changer. Although this exacerbates the risk of volatility, higher fishing license revenues have boosted nontax revenue collections twofold to fourfold in the FSM, Kiribati, the Marshall Islands, Nauru, and Tuvalu.

Despite these recent positive trends, domestic resource revenue mobilization among the SIDS is generally insufficient to cover the public spending needs for basic services. Even though expenditures are generally achieving good results, high cost structures, coupled with the minimum costs of running fully functioning government systems, result in disproportionately high recurrent public spending in these small economies. A growing need for government spending on critical infrastructure is another urgent issue for the SIDS.

Among the SIDS, the tourism-based economies come closest to being able to cover public spending needs through domestic revenue generation (Table). However, even with a combination of strong tax effort and some supplementary nontax sources, e.g., departure fees, environmental fees, some fishing license revenues, these economies are unable to cover their current expenditures. The resource exporters run deficits reflective of significant spending needs to cover large populations dispersed across geographic land areas. Although the smaller islands and atolls registered the highest domestic revenue mobilization rate, helped by booming fishing license revenues, this group nonetheless also experienced wide shortfalls. This shows that recurrent expenditure remains disproportionately elevated in the context of very narrow economic bases and reflects substantial remaining infrastructure gaps in these SIDS.

Development financing needs

Given the limited resources to finance public investments, a significant backlog remains that is manifest in low access to basic services. For example, access to electricity services is only about 33.0% among Pacific SIDS, compared with 87.4% globally. Similarly, substantial gaps remain in the provision of water supply (52.6% versus 88.5% globally) and sanitation services (30.0% versus 68.0%). On top of the basic infrastructure needs, substantial financing is also needed to support adaptation to climate change and build buffers for disaster response, recovery, and reconstruction.

Although infrastructure, climate change adaptation, and disaster risk management are common priorities across all the SIDS, their respective ranks may vary in the three subgroups. Among the large resource exporters, gaps in access to basic infrastructure services remain wide. For example, electrification rates are only about 20% in PNG and Solomon Islands, and road densities are also low. Priority needs are focused on closing these gaps, which will require substantial resources in view of larger populations and more extensive geographical areas to be covered. Other needs include measures to safeguard the sustainability of key exports and support the development of non-resource-based sectors, mainly through further infrastructure and policy improvements, towards developing a more robust economic base.

Access to basic services is somewhat better in tourism-based economies—with exceptions, such as low electrification in Vanuatu. These economies may prioritize ensuring the sustainability of tourism-driven growth in the face of vulnerability to external shocks. This can be achieved by safeguarding the main tourist attractions; building additional infrastructure to strengthen air, maritime, and

Table 1: Fiscal Aggregates among ADB Small Island Developing States, 2008–2017
(% of gross domestic product)

Item	Larger Resource Exporters	Tourism-Based Economies	Smaller Islands and Atolls
Domestic revenues	**24.7**	**23.9**	**47.7**
Tax revenues	20.3	20.2	18.2
Nontax revenues	4.4	3.7	29.5
Total expenditure	**45.4**	**31.5**	**65.1**
Current expenditure	35.7	24.6	51.6
Capital expenditure	9.7	6.9	13.6
Recurrent balance	**(11.0)**	**(0.8)**	**(3.8)**
Overall balance (excluding grants)	**(20.7)**	**(7.6)**	**(17.5)**

( ) = negative.
Note: Includes the Cook Islands, the Federated States of Micronesia, Fiji, Kiribati, Maldives, the Marshall Islands, Nauru, Palau, Papua New Guinea, Solomon Islands, Samoa, Timor-Leste, Tonga, Tuvalu, and Vanuatu.
Source: Asian Development Bank estimates.

land transport as well as digital connectivity; building more resilient infrastructure to minimize the impacts of disasters and climate change; and strengthening forward and backward linkages of the tourism sector with local input providers (e.g., agriculture produce for hotels, local services). Climate- and disaster-proofing can help reduce the magnitudes of, and recovery times from, major events, and minimize macroeconomic volatility.

The smallest and most dispersed SIDS generally face the most acute resource constraints. They have substantial remaining needs for infrastructure to boost domestic and international connectivity, and to build climate and disaster resilience. Development assistance will also continue to be necessary to help bridge operating deficits—particularly amid unforeseen downturns in key sources of revenue—and to supplement capacities to support fully functioning government systems. Some of these economies also require support to clear operating arrears and build reserves for longer-term fiscal sustainability, given their limited sources of growth and fiscal revenues.

The crucial role of concessional assistance

External borrowing among the SIDS is mostly limited to public and publicly guaranteed borrowing from bilateral and multilateral partners, as almost all the SIDS lack access to commercial borrowing. The International Monetary Fund notes that debt vulnerabilities in most SIDS have been rising, largely reflecting external financing flows for infrastructure development (Saito 2018). Further, the International Monetary Fund's latest debt sustainability analyses show that a majority of the 15 SIDS, including all 6 smaller islands and atolls, face a high risk of external debt distress.

However, it is important to highlight here that (i) the median public debt-to-GDP ratio among the SIDS currently remains lower than the emerging and developing Asia average; and (ii) none of the SIDS are technically in debt distress—a rating reserved for countries that are already experiencing difficulties in servicing their debt or need debt restructuring. Despite structural vulnerabilities, this shows that the SIDS have been responsibly managing debt risks. Most SIDS are taking significant steps to improve their governments' fiscal planning and management capacity, formulate and implement debt management policies and strategies, pursue broad-based reforms to reduce the pressure to borrow, and build the capacity to repay existing debt by strengthening annual revenue streams.

Development partners can help address the debt distress risks faced by the SIDS, both by providing and leveraging concessional financing, including grants, for those in greatest need and by incentivizing them to better manage their debt vulnerabilities by tapping into sustainable sources of financing. With financial and technical support from the international community, the SIDS have demonstrated their capacity to contain debt-related risks as well as continue on paths toward broadening the revenue base, strengthening tax administration, eliminating wasteful subsidies, and prioritizing spending initiatives on social priorities. Steady concessional assistance flows will also mitigate the risk that the SIDS may spend more on debt service and less on service delivery, and will be particularly important in helping the SIDS keep away from high-cost borrowing from non-concessional sources.

The SIDS will continue to face development challenges to different degrees. At the same time, they must position themselves to take full advantage of their respective, albeit often limited, opportunities over the longer term in order to accelerate economic growth and improve standards of living. International development assistance must support the SIDS in meeting their respective visions for transformation and eventually completing an ambitious, but nevertheless achievable, development agenda.

Lead authors: Ananya Basu and Rommel Rabanal

Endnote

[1] Out of the 15 SIDS that are ADB members covered in this policy brief, 13 are in the Pacific: the Cook Islands, the Federated States of Micronesia, Fiji, Kiribati, the Marshall Islands, Nauru, Palau, Papua New Guinea, Solomon Islands, Samoa, Tonga, Tuvalu, and Vanuatu. Only Maldives and Timor-Leste (classified under Southeast Asia, effective October 2019) are not in the Pacific.

ADB members Niue and Singapore, listed by United Nations Sustainable Development Goals as SIDS, are not included in the analysis.

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Mapping fragility in the Pacific

The Pacific small island developing states (SIDS) face structural constraints relating to their small size, geographic remoteness and dispersion, and vulnerability to natural hazards and climate change (pp. 30-34). Many SIDS also have limited institutional capacities, often because of the small size of government institutions, which affects governments' ability to fulfill key functions and provide social and infrastructure services. The position of many of the SIDS may be worsened by factors such as political instability and particularly weak governance. The Asian Development Bank (ADB) and other multilateral development partners classify such SIDS as fragile and conflict-affected situations (FCAS).[1] They experience the constraints all Pacific SIDS do, but to a far more stark degree. Conflict is not a major source of fragility in the Pacific, but rather many Pacific FCAS are characterized by governments that struggle to carry out basic functions, such as the collection of revenue or delivery of public services, and, ultimately, implement poverty reduction strategies. Disasters and external shocks hit them harder; resilience to such risks is low; and the capacity of governments, institutions, and economies to manage and build defenses against disturbances in commodity or financial markets or drastic shifts in climate conditions is lacking.

Country performance assessments

An important insight into the factors contributing to weak public sector management and governance of fragile situations in the Pacific can be drawn based on ADB's country performance assessments (CPAs). In line with the principle that aid is most effective in accelerating economic growth and poverty reduction in countries where policy and institutional performance is strong, ADB conducts regular CPAs for all developing member countries (DMCs) with access to its concessional resources.[2] The CPA assesses DMCs' policy and institutional frameworks for promoting poverty reduction and sustainable growth, and effectively using concessional assistance. ADB uses CPA results to derive its concessional resource allocations and identify countries that are classified as FCAS.[3]

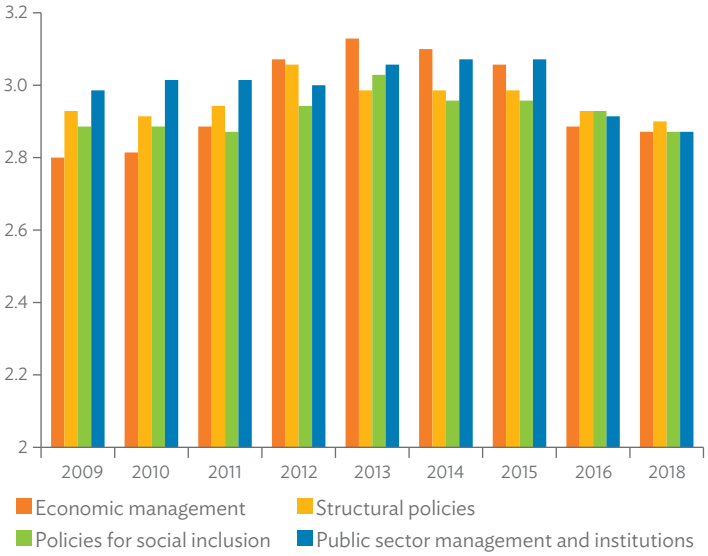
The CPA assesses the performance of each country based on the following parameters: (i) quality of macroeconomic management, (ii) coherence of structural policies, (iii) degree to which policies and institutions promote equity and inclusion, (iv) quality of governance and public sector management, and (v) performance of concessional assistance project portfolio.

This policy brief reviews the performance of the seven Pacific countries classified as FCAS based on the results of the latest CPA exercise in 2018: Kiribati, the Marshall Islands, the Federated States of Micronesia (FSM), Nauru, Papua New Guinea (PNG), Solomon Islands, and Tuvalu.[4] It maps out the major challenges that these countries face in ensuring that their policy and institutional frameworks support poverty reduction, sustainable growth, and the effective use of development assistance. These can then guide both policy makers and development partners in prioritizing policies and funding, and implementing projects and programs. The brief focuses on four CPA clusters: (i) economic management, (ii) structural policies, (iii) policies for social inclusion/equity, and (iv) public sector management and institutions.

Key findings

From 2009 to 2018, the average scores of fragile situations in the Pacific for each of the four clusters remained below the 3.2 cutoff point for classification as FCAS. Despite significant efforts made during the decade to improve policy and institutional performance, these countries continue to face challenges in effectively addressing some of the sources of fragility. While some improvements in the CPA results can be observed over the 10-year period, these have not been sufficient to allow these countries to exit the FCAS category. From 2015 onwards, scores for all the clusters fell after rising in the previous years (Figure 3).

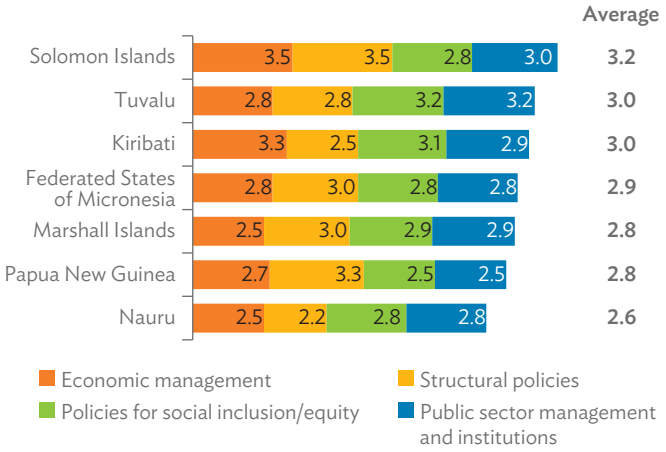
Figure 3: Average Country Performance Assessment Scores of Pacific Countries Classified as Fragile and Conflict-Affected Situations, 2009-2018



Note: The average country performance assessment (CPA) scores are derived based on the average rating for each of the four clusters from 2009 to 2018 of the seven Pacific countries classified as FCAS for the 2019 operations of the Asian Development Bank. These countries include: the Federated States of Micronesia; Kiribati; Marshall Islands; Nauru; Papua New Guinea; Solomon Islands; and Tuvalu. Starting 2016, the CPA is conducted every two years.
Sources: ADB annual reports on the country performance assessment exercise (various years).

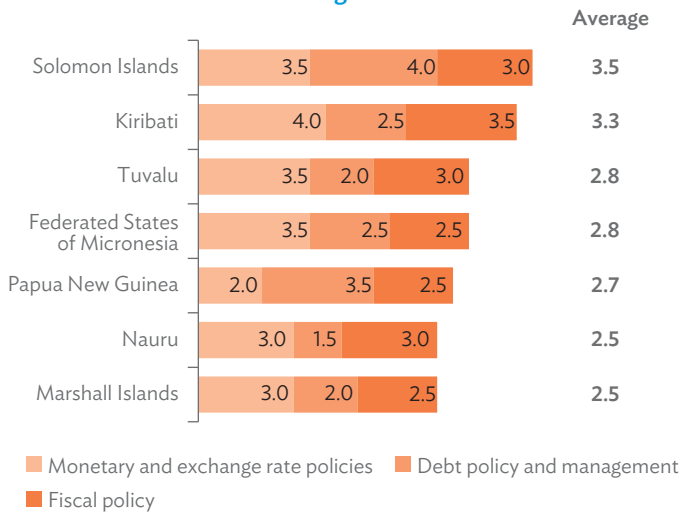
In the 2018 CPA, the average scores of all Pacific fragile situations across the four clusters were almost identical. In turn, this meant that, while the countries were able to achieve some progress in economic management from 2009 to 2018, their performance in structural policies and public sector management and institutions declined during the same period. Further, a more detailed analysis of the 2018 results showed that each country experienced different challenges related to their policy and institutional framework, and the results varied across different indicators within each cluster (Figure 4).

Figure 4: 2018 Country Performance Assessment Scores of Pacific Countries Classified as Fragile and Conflict-Affected Situations



Source: ADB. 2019. *Annual Report on the 2018 Country Performance Assessment Exercise.* Manila. https://www.adb.org/sites/default/files/institutionaldocument/499546/country-performance-assessment-2018.pdf.

Figure 5: 2018 Country Scores on Indicators for Economic Management of Pacific FCAS



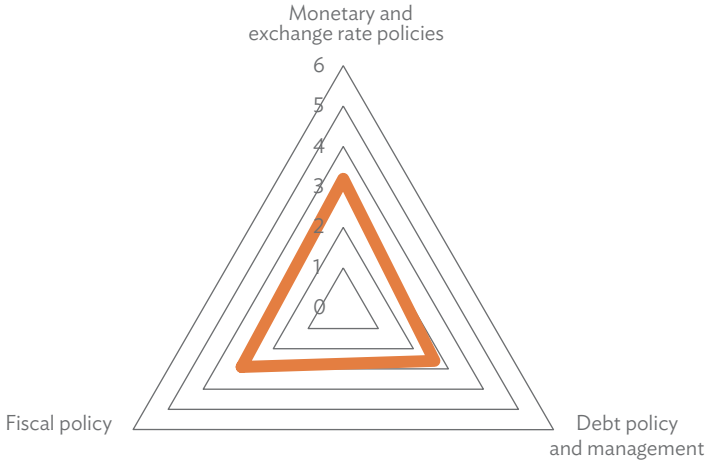
FCAS = fragile and conflict-affected situation.
Source: ADB. 2019. *Annual Report on the 2018 Country Performance Assessment Exercise.* Manila. https://www.adb.org/sites/default/files/institutional-document/499546/country-performance-assessment-2018.pdf.

Economic management

This cluster assesses (i) the quality of monetary and exchange rate policies in a coherent macroeconomic policy framework, (ii) the quality of fiscal policy in its stabilization and allocation functions, and (iii) whether the country's debt management strategy is conducive to ensuring medium-term debt sustainability and minimizing budgetary risks.[5] Looking across countries, the Marshall Islands, Nauru, PNG, FSM, and Tuvalu had low scores (3.2 or lower) in this cluster while Kiribati and Solomon Islands had scores above the cutoff point (Figure 5). In general, the fragile situations in the Pacific remain dependent on external assistance and had narrow, sometimes volatile, sources of revenue. Weak institutions, limited government capacities, and shortcomings in public financial management systems affect their sound economic management.

Among the three areas under this cluster, debt policy and management received the lowest average CPA score (Figure 6). The criterion looks at the extent to which external and domestic debts are contracted with a view to maintaining debt sustainability, and the effectiveness of debt management functions. Solomon Islands, which had the highest score in this category among the seven countries, made significant efforts to revise and strengthen its Debt Management Framework. The framework provides guidelines for new borrowing. At the same time, the latest Debt Sustainability Analysis indicated that the external risk of debt distress in Solomon Islands remained moderate. Nauru, which performed relatively poor in terms of debt policy and management and received the overall lowest score in this cluster, was categorized at high risk of debt distress. During the economic downturn in the 1990s–2000s, Nauru defaulted on most of its public debt and accumulated arrears. Since 2012, the economic situation has improved substantially, and the government has been using fiscal surpluses to accumulate deposits and clear some domestic arrears. In addition to Nauru, FSM, Kiribati, the Marshall Islands, and Tuvalu all face high risk of debt distress.

Figure 6: Average Country Performance Assessment Score on Economic Management Indicators of Pacific FCAS, 2018

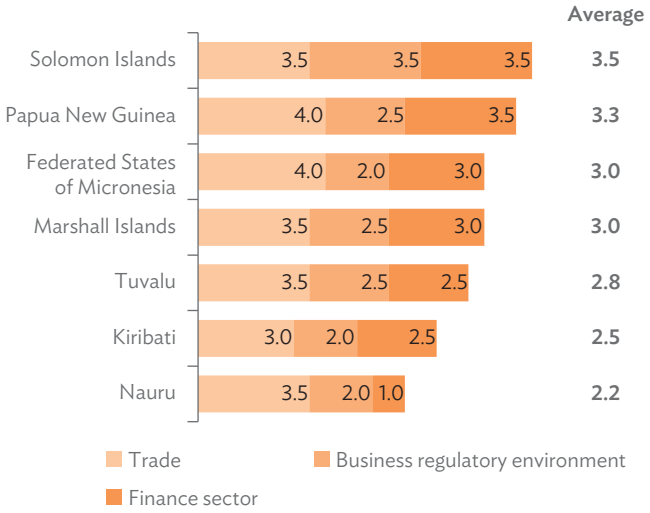


FCAS = fragile and conflict-affected situation.
Source: ADB. 2019. *Annual Report on the 2018 Country Performance Assessment Exercise.* Manila. https://www.adb.org/sites/default/files/institutional-document/499546/country-performance-assessment-2018.pdf.

Structural policies

This cluster assesses (i) how the policy framework fosters global integration in goods and services trade; (ii) the policies and regulations that affect finance sector development; and (iii) the extent to which the legal, regulatory, and policy environment helps or hinders private business in investing, creating jobs, and becoming more productive.[5] Kiribati, the Marshall Islands, FSM, Nauru, and Tuvalu were among the countries that had low scores in this cluster, while PNG and Solomon Islands received scores marginally above the cutoff point (Figure 7).

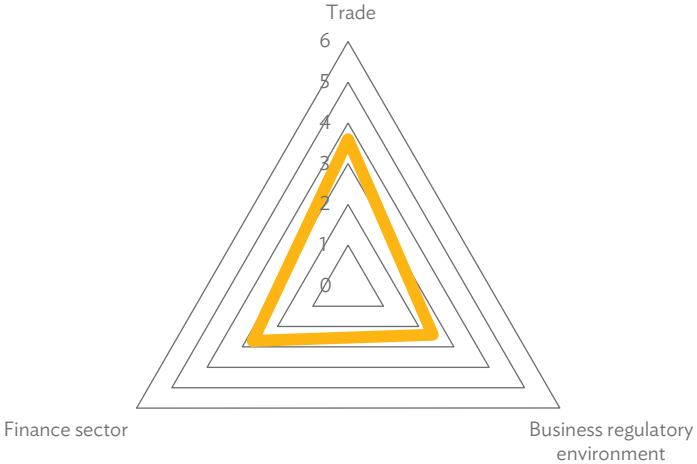
Figure 7: 2018 Country Scores on Indicators for Structural Policies of Pacific FCAS



FCAS = fragile and conflict-affected situation.
Source: ADB. 2019. *Annual Report on the 2018 Country Performance Assessment Exercise.* Manila. https://www.adb.org/sites/default/files/institutional-document/499546/country-performance-assessment-2018.pdf.

Among the three criteria for this cluster, business regulatory environment had the lowest average CPA score (Figure 8). The criterion looks at the direct regulations of business activity and regulation of goods and factor markets; and focuses on regulations affecting entry, exit, and competition; ongoing business operations; and labor and land markets. The public sector dominates economic activities in fragile situations in the Pacific. Slow and costly processes and complex requirements for business start-up are common issues, creating a difficult business environment and discouraging private sector participation. Poor infrastructure and weak information and communication technology also constrain private sector investments. Moreover, because of underdeveloped banking systems and narrow financial markets, access to and availability of financial services are very limited.

Figure 8: Average Country Performance Assessment Score on Structural Policies Indicators of Pacific FCAS, 2018



FCAS = fragile and conflict-affected situation.
Source: ADB. 2019. *Annual Report on the 2018 Country Performance Assessment Exercise.* Manila. https://www.adb.org/sites/default/files/institutional-document/499546/country-performance-assessment-2018.pdf.

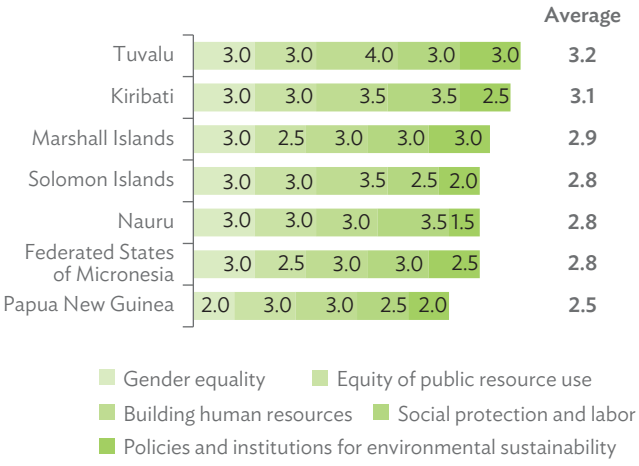
Customary land ownership acts as a disincentive for securing credit and starting up a business. Unresolved land disputes, lack of property records, and policy restrictions on land use, especially in terms of foreign private investments, also adversely affect the business environment.

Policies for social inclusion/equity

This cluster assesses (i) the extent to which the country has enacted and put in place institutions and programs to enforce gender equality laws and policies; (ii) the extent to which the pattern of public expenditures and revenue collection affects the poor and is consistent with national poverty reduction priorities; (iii) the national policies and public and private sector service delivery that affect access to and quality of health- and education-related services; (iv) social protection and labor policies, namely those engaged in risk prevention, protection against destitution, and promotion of human capital development; and (v) the extent to which environmental policies and institutions foster the protection and sustainable use of natural resources and the management of pollution. PNG stood out among the seven countries with low results for this cluster (Figure 9), while all seven fragile situations countries in the Pacific received relatively low scores (3.2 or less) on policies and institutions for environmental sustainability.

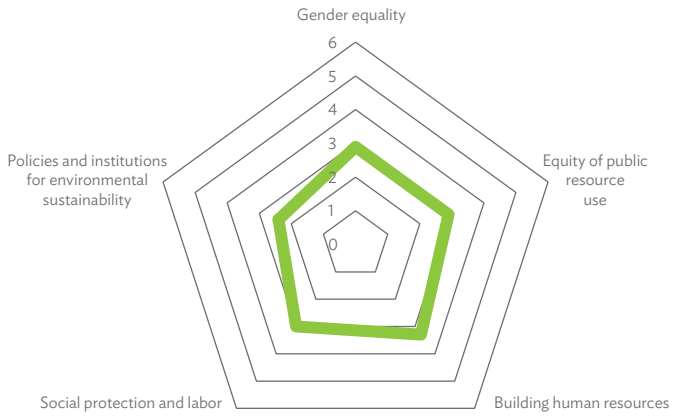
Among the five areas under this cluster, policies and institutions for environmental sustainability received the lowest average score (Figure 10). The criterion covers crosscutting issues that relate to the policy-making process, and assesses policies and institutions at a sectoral level. Environment issues cut across many economic sectors, and each sector has its specific set of issues. Fragile situations are very vulnerable to climate change and natural hazards. Dealing with the increasing impacts of climate change is a pressing concern in these countries because of low government implementation and management capacity, lack of institutional coordination, weak enforcement of environmental policies, inadequate human resources, and funding constraints.

Figure 9: 2018 Country Scores on Indicators for Policies for Social Inclusion/Equity of Pacific FCAS



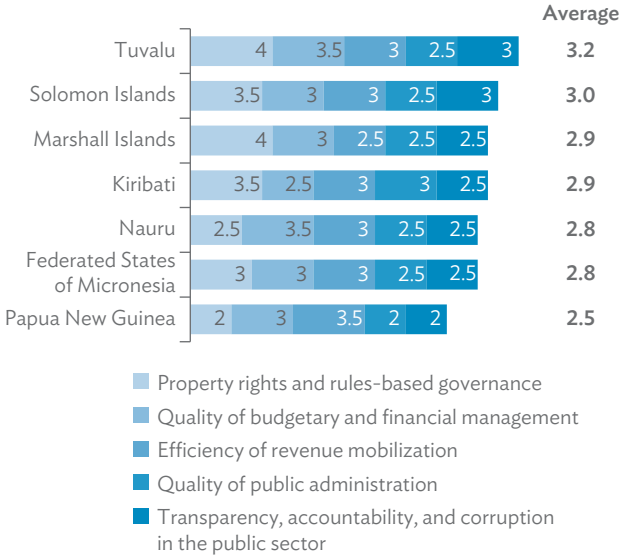
FCAS = fragile and conflict-affected situation.
Source: ADB. 2019. *Annual Report on the 2018 Country Performance Assessment Exercise.* Manila. https://www.adb.org/sites/default/files/institutional-document/499546/country-performance-assessment-2018.pdf.

Figure 10: Average Country Performance Assessment Score on Indicators for Policies for Social Inclusion/Equity of Pacific FCAS, 2018



FCAS = fragile and conflict-affected situation.
Source: ADB. 2019. *Annual Report on the 2018 Country Performance Assessment Exercise.* Manila. https://www.adb.org/sites/default/files/institutional-document/499546/country-performance-assessment-2018.pdf.

Figure 11: 2018 Country Scores on Indicators for Public Sector Management and Institutions of Pacific FCAS



FCAS = fragile and conflict-affected situation.
Source: ADB. 2019. *Annual Report on the 2018 Country Performance Assessment Exercise.* Manila. https://www.adb.org/sites/default/files/institutional-document/499546/country-performance-assessment-2018.pdf.

Gender inequality persists because of institutional and sociocultural barriers. Women's participation in the male-dominated formal economy is limited, resulting in lesser economic opportunities. They are also underrepresented in political affairs and public decision-making processes. Gender-based violence is also a common concern, yet the institutional response of the justice system and the enforcement of laws to penalize perpetrators in these countries are weak. Significant gender disparities also exist in business ownership and access to credit, land tenure, and property ownership.

While there is an increasing focus on building human capital, geographic disparities exist in the provision of and access to basic services, such as physical infrastructure, health, and education as well as income-earning opportunities. Limited government capacity in Pacific fragile situations also result in difficulty in developing and implementing targeted programs and responding to the needs of the marginalized and vulnerable groups. Formal social protection mechanisms and programs remain inadequate. While traditional social protection systems help in coping with hardships, these are slowly breaking down as a result of rapid urbanization and modernization.

Public sector management and institutions

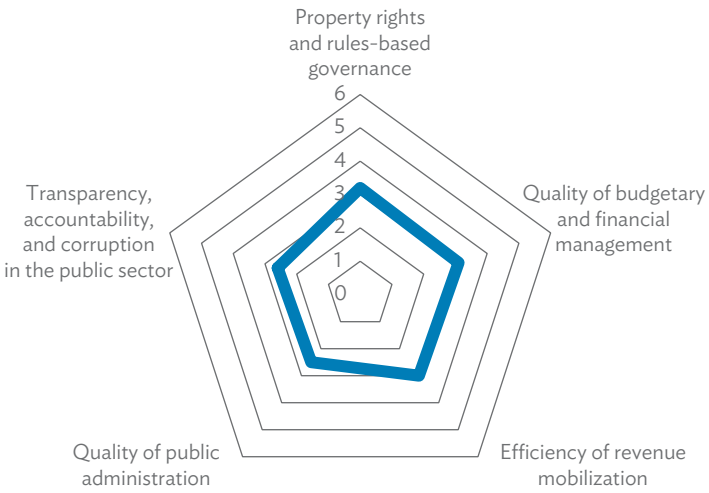
This cluster assesses (i) the extent to which economic activity is facilitated by an effective legal system and rule-based governance structure in which property and contract rights are reliably respected and enforced; (ii) the quality of budgetary and financial management; (iii) the overall pattern of revenue mobilization, including revenue from all sources as they are actually collected; (iv) the quality of public administration; and (v) transparency, accountability, and corruption in the public sector. All seven Pacific fragile situation countries received low scores (3.2 or less) in this cluster (Figure 11).

Among the five areas under this cluster, the quality of public administration and transparency, accountability, and corruption in the public sector received the lowest average CPA scores (Figure 12). The later criterion assesses the extent to which the executive, legislators, and other high-level officials can be held accountable for their use of funds, administrative decisions, and results obtained. PNG scored quite low on this criterion, with particularly low results related to a subcategory focusing on crime and violence as an impediment to economic activity and citizen security. Violence and crime continue to pose serious law and order problems in PNG and affect the business climate in the country. This situation contrasted quite significantly with Tuvalu, which scored quite high on the subcategory focusing on crime and violence, with the state being mostly able to protect the lives and property of its citizens, and the police generally trusted and viewed as honest.

Weak public administration is also a common issue for all fragile situations. Coordination mechanisms usually exist at different levels of government structures, but these are not often effective at an operational level resulting in inefficient public service delivery. Fragile situations have also inadequate capacity to manage public funds because of shortfalls in public financial management systems and shortages of skilled staff.

Securing property rights is another common concern because of weaknesses in land tenure systems. Meanwhile, poor tax administration results in low collection rates. Overlapping government functions, uncoordinated policy formulation, low implementation and monitoring capacity, and absence of effective accountability mechanisms also constrain good governance.

Figure 12: Average Country Performance Assessment Score on Indicators for Public Sector and Management Institutions of Pacific FCAS, 2018



FCAS = fragile and conflict-affected situation.
Source: ADB. 2019. *Annual Report on the 2018 Country Performance Assessment Exercise.* Manila. https://www.adb.org/sites/default/files/institutional-document/499546/country-performance-assessment-2018.pdf.

Given the generally top-down planning processes of governments, participation of civil society organizations (CSOs) in policy formulation and development is very limited. In terms of implementation. However, their vital role and contribution in ensuring quality public service delivery, especially social services, are recognized. Because of CSOs' limited platforms and capacity to monitor and assess government performance in service provision and prevent the abuse of power, their watchdog function in some instances is also being undermined. Thus, expanding civic space and strengthening CSO capacities are crucial in enhancing accountability and transparency in government.

Conclusions and recommendations

ADB and other bilateral and multilateral development partners recognize the distinct development challenges of the SIDS, including fragile situations in the Pacific, and have been working to tailor their support and processes to these unique circumstances. Strategy 2030, ADB's long-term corporate strategy, recognizes that ADB must adopt differentiated approaches in its support of DMCs that are SIDS and those that face the distinctive development challenges posed by FCAS. Under Strategy 2030, ADB prioritizes its support by providing long-term financing and capacity development assistance to help build resilience and address causes of fragility or conflict. An important aspect of this support is focus on strengthening public service delivery and governance, as well as improving policy and institutional performance.

The CPA results show that, despite some progress made since 2009, much remains to be done to support the fragile situation countries in the Pacific in developing their policy and institutional frameworks for promoting poverty reduction, sustainable growth, and effectively using concessional assistance. The results also highlight the need for continuous focus on strengthening institutions and building government staff capacity. Development partners need to continue improving their existing approaches and find new solutions to supporting institutional capacity development. One possible approach is to fully integrate a fragility-sensitive approach throughout all stages of strategic planning and operations in these countries. Under such approaches, special attention should be paid to understanding the local context and the capacity of government counterpart institutions, incorporating resiliency measures, building institutional capacities, and ensuring the sustainability of the interventions.

At the same time, development partners must recognize that some of the institutional weaknesses in the Pacific are related to the small size of government institutions, reflecting small overall populations in many of these countries. These institutions often have highly skilled and qualified staff who are spread very thinly and required to perform a wide range of functions. As such, development partners should look at their own processes and approaches to working in the Pacific, and ensure that these are tailored to the local context. Emphasis should be made on streamlining and simplifying processes, and choosing technological solutions that fit the local context and capacity. Development partners also need to be realistic about the time required to implement a reform agenda.

At the national level, leaders and policymakers need to work on providing stability and continuity. Frequent changes to government, followed by reshuffles in the leadership of government agencies and departments, can affect the positive momentum of the reform process. Strong emphasis should be paid to ensuring that appropriate policies facilitate staff development and retention. At the same time, attention should be paid to continuing to improve transparency and accountability at all levels of government and ensuring that national development priorities and allocation of government resources are not overly influenced by "tribal" politics. Having a fair, transparent, and fully accountable system of governance is essential for reducing poverty and achieving sustainable growth.

Investing in people—including providing quality education, health services, basic social protection, and security, and ensuring gender equality—is essential for any nation, but even more so for Pacific countries in fragile situations. Many countries have large groups of young people who want to make a positive contribution to the development of their nations, but continue to face challenges in accessing quality education and employment opportunities. At the same time, the traditional social structures within the Pacific are changing, with many people no longer able to depend on traditional social support networks. Women and girls continue to be mistreated, with countries such as PNG being ranked as one of the most dangerous places for women in the world. Empowering women and girls in economic development and politics would greatly benefit countries in fragile situations in the Pacific by unleashing their entrepreneurial skills and significantly contributing to stability and peace.

The need to provide employment opportunities to all citizens, including large proportions of young people and women and girls, is another major challenge facing policymakers. Policymakers need to look beyond the public sector and invest considerable effort in promoting private sector development. Efforts must focus on making

Pacific nations more business-friendly, reducing the dominant role of state-owned enterprises, and promoting fair and transparent market competition free of political influence. In line with the CPA findings, there is a need to improve regulations of business activity and regulation of goods, labor, and land markets, as well as regulations affecting entry, exit, and competition. Basic infrastructure must be developed to facilitate sustainable and inclusive economic growth. A particular difficulty is finding a solution to land tenure issues that balances the rights of traditional owners with the need for a transparent and fair system that facilitates development and private sector investment.

Finally, national leaders and development partners must work together to address the existential issue of climate change, environmental sustainability, and disasters caused by natural hazards in the Pacific. Climate change is recognized globally as a "threat multiplier" that compounds already fragile situations by further increasing countries' vulnerability to adverse effects, such as extreme weather events and disasters, volatile food prices, sea-level rise, and coastal degradation. These challenges are far too big for countries in fragile situations in the Pacific to address on their own, and the development community needs to support them in building resilience to climate change, developing the capacity to reduce risks, and effectively responding to disasters caused by natural hazards. Endowed with a large share of well-preserved oceans, the leaders of countries in fragile situations in the Pacific must also ensure that this great resource is protected for future generations.

Lead author: Artur Andrysiak and Desiree Guevara

Endnotes

1 There are 14 SIDS in the Pacific that are ADB developing member countries (DMCs), of which 7 are classified as FCAS for its 2019 operations. These are Kiribati, the Marshall Islands, the Federated States of Micronesia, Nauru, Papua New Guinea, Solomon Islands, and Tuvalu. The remaining SIDS are the Cook Islands, Fiji, Niue, Palau, Samoa, Tonga, and Vanuatu. Timor-Leste, also an FCAS country, is classified as part of Southeast Asia effective October 2019 and not included in this analysis.

2 ADB. 2016. Concessional Assistance Policy. Manila. As required by the CAP, ADB uses the International Development Association country policy and institutional assessment questionnaire and guidelines for the country performance assessments. Country Performance Assessments are conducted for the following Pacific DMCs: Kiribati, the Marshall Islands, the Federated States of Micronesia, Nauru, Palau, Papua New Guinea, Samoa, Solomon Islands, Tonga, Tuvalu, and Vanuatu.

3 ADB uses the multilateral development banks' harmonized ratings for determining FCAS. A country is considered FCAS if it has an average rating of 3.2 or less based on the ADB CPA and the WBG country policy and institutional assessment. A country is also considered FCAS if a United Nations and/or regional peacekeeping or peace-building mission has been present during the past 3 years.

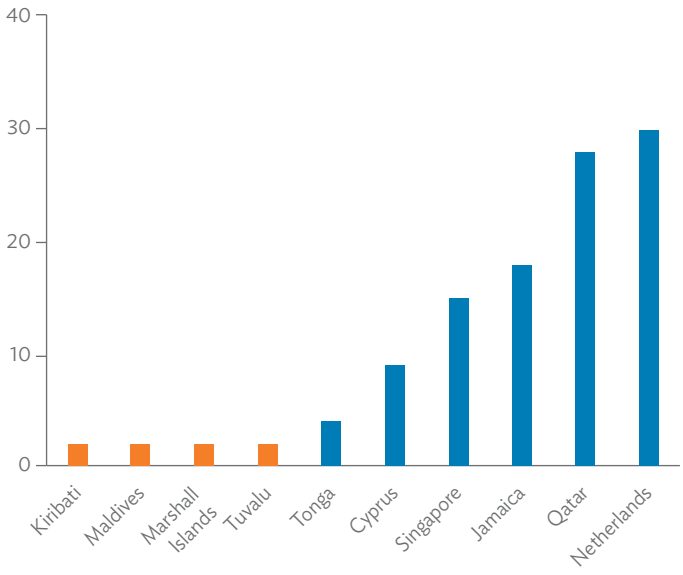
4 ADB. 2019. Annual Report on the 2018 Country Performance Assessment Exercise. Manila. https://www.adb.org/sites/default/files/institutional-document/499546/country-performance-assessment-2018.pdf.

5 World Bank. 2017. CPIA Criteria 2017. Washington, DC.

Atoll nations: Key takeaways from the frontlines of climate change

Atolls are formed from ring-shaped coral reefs enclosing lagoons. Atoll nations are small and low-lying, with an average elevation of about 2 meters above sea level (Figure 13), and highly vulnerable to the adverse impacts of climate change, especially on the surrounding marine areas. Rising sea levels erode coastal protection and leave people and property more exposed to more intense disasters. Coral bleaching and ocean acidification destroy marine resources that are vital to local food security and livelihoods, including tourism; and more extreme droughts and flooding threaten already limited freshwater resources on these atolls. Over time, if climate change continues unchecked, adaptation measures will evolve from climate-proofing infrastructure and strengthening coastal protection into more radical strategies, such as relocating people, reclaiming land, or creating new islands or settlements.

Figure 13: Atoll Nations are the Lowest-Lying in the World
(average elevation in meters above sea level)



Source: ADB. 2019. *Setting the Scene: Reflection on the 1st Atoll Adaptation Dialogue.* Presentation prepared for the Resilient Atoll Nations in Productive Oceans high-level dialogue and conference. Malé. 27–29 August.

On 27–29 August 2019, the Asian Development Bank (ADB) atoll nation members—Kiribati, Maldives, the Marshall Islands, and Tuvalu—participated in the "Resilient Atoll Nations in Productive Oceans" high-level dialogue and conference in Malé, Maldives. The event builds on the First Atoll Adaption Dialogue held last April, and the work of the Coalition of Atoll Nations against Climate Change (CAN-CC), which was formed in 2014 by these four nations and Tokelau to draw international attention to their disproportionate struggle with climate change. CAN-CC is also pushing for legally binding agreements, global targets that genuinely address impacts being felt on the ground, and immediate resourcing of measures to build climate resilience, including public awareness and capacity building.

The conference aimed to foster dialogue among the participating developing countries, provide a platform for their message about climate change, and help them map out next steps in adaptation as well as identify options for financing. Together, the atoll nations identified the following action points:

- **Accelerate responses to climate change and disaster risk.** Citizens of atoll nations have the right to remain in their homelands and preserve their ways of life. However, the already heightened risk from disasters and climate change require these nations to accelerate their planning and implementation of measures to ensure sustainability, build resilience, and enable adaptation. At the conference, representatives from the atoll nations expressed a need for support—in technical expertise as well as funding—to plan for and invest in resilience and adaptation, as well as build their own capacity to manage change.

- **Strengthen atoll nation collaboration and partnership.** Sustained dialogue and knowledge-sharing will help the atoll nations pursue their collective mission to raise international awareness about the risks of slow action—or inaction—on climate change. Also, a stronger partnership would allow atoll nations to adopt multicountry approaches in developing, as well as tapping innovative financing mechanisms for, climate change and disaster risk interventions. Formalizing their partnership through entering a framework agreement or establishing a CAN-CC Secretariat and Atoll Center of Excellence were highlighted as possible ways forward.

- **Improve data gathering and risk assessment.** At the conference, the atoll nations highlighted the need to take stock and identify gaps in data. Light Detection and Ranging assessments were deemed necessary to help address critical gaps. Quantitative risk assessments based on more sound baseline data would enable evidence-based decision-making by scientifically estimating the frequency and intensity of future disasters, as well as gauging the risk to and impact on various sectors of the economy. Findings help governments identify the most at-risk sectors, allowing them to set public investment priorities, and determine the most cost-effective adaptation and mitigation solutions. Large-scale risk studies, such as the country risk profiles prepared by the Pacific Catastrophe Risk Assessment and Financing Initiative, are another useful source of consistent primary data.

- **Promote nature-based and traditional solutions.** Modern technological innovations have their benefits, but nature-based and traditional options must also be employed where feasible as these are also cost-effective and sustainable ways of dealing with heightened climate change and disaster risk. At the conference, the atoll nations identified coastal protection among their top

priorities; restoring and preserving coral reefs, which act as breakwaters that alter wave patterns, and mangroves that trap sediment coming from inland waterways are both natural ways to protect coastlines and marine environments.

- **Recognize economic ownership and unique investment opportunities.** Although small in terms of land mass, atoll nations have large exclusive economic zones with significant economic potential; but harnessing this potential requires ensuring sustainability as well as a positive return on investment. Atoll nations are encouraged to establish the legislative and policy environments that are necessary to uphold their commitments to sustainable development and protect their natural assets, as well as integrate climate change adaptation in developing infrastructure investments to ensure that they support development well into the future.

- **Prioritize spatial planning.** Given an atoll's limited land surface, spatial planning is key to maximizing benefits from strategic infrastructure. Atoll nations also need to develop enforceable marine spatial plans for their exclusive economic zones that consider the views of local communities and traditional knowledge. Such plans would identify and protect the most critical ocean and coastal assets, as well as inform the allocation of areas for development, e.g., fisheries and marine-protected areas.

- **Properly value and account for ocean resources that make up the "blue economy."** Besides incorporating them into marine spatial plans, the value of ocean assets must be considered in national economic accounts. Proper valuation will help emphasize to stakeholders the importance of protecting these assets and their potential to generate inclusive growth in island economies, as well as enrich the cost-benefit analyses of potential investments whether for development (e.g., infrastructure) or for profit.

- **Secure development partner funding now.** Investments in climate adaptation and disaster risk mitigation are estimated to cost the equivalent of 5%–10% of gross domestic product every year for most of the Pacific, and up to the equivalent of 20% of gross domestic product every year for an atoll nation. Currently, although development partner organizations currently have more funds to invest in the Pacific, resource constraints may emerge over time as developed economies experience the adverse impacts of climate change and shift focus from contributing to development funds towards addressing challenges at home.

- **Explore other options for financing.** Private and "impact" investors (i.e., those who invest to realize positive socioeconomic as well as financial returns) could be attracted to island economies' ocean assets, which would help diversify portfolios from their conventional land assets, but this would depend on the presence of reliable data on risk and valuation, enabling laws and regulations, and risk-mitigating mechanisms such as insurance. Governments of atoll nations could also consider tapping revenues from strategic blue economy sectors, such as fisheries and tourism, to help fund public investments in environmental protection and climate change adaptation. Finally, development partners are also developing new options for financing, such as ADB's Oceans Financing Initiative that will support projects designed to promote ocean health and the blue economy. Complementary support will help mitigate any risks to investing in these projects.

Atoll nations face not only elevated threats from climate change and increased extreme weather events, but also the challenge of growing their economies by properly harnessing their sizable ocean assets. Both are important to preserve their homelands and cultural identities. Collaboration among governments, local stakeholders, and development partners will be key in developing, resourcing, and implementing urgently needed measures to adapt to climate change and manage disaster risk. Atoll nations will also need support in creating an enabling policy environment and implementing proper spatial planning and valuation to attract investors in the blue economy and help promote sustainable and inclusive development in their economies.

Lead author: Cara Tinio

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Poverty reduction challenges: Insights from Papua New Guinea

Inclusive and sustainable growth requires not only strong and stable economic performance, but also calibrated measures to address inequalities of opportunity. Although poverty reduction is a common and continuing challenge for all developing countries, it is even more so in small island developing states, particularly fragile situations. Inflows of overseas remittances, development assistance, and offshore revenues, including from extractive enclave sectors tend to inflate conventional income measures and mask the true extent of poverty among small island developing states, particularly in rural and remote outer island communities. Further, heightened economic vulnerability results in periodic cycles of increased hardship, while high costs of service delivery present persistent challenges to sustaining progress in reducing poverty. This policy brief explores recent trends in poverty and inclusiveness in Papua New Guinea (PNG), and offers broad recommendations for accelerating human development.

Poverty in Papua New Guinea

Poverty is widespread in PNG, where people lack adequate living conditions and access to services, including health, education, clean water, transport, and roads. Life expectancy is low at 65.7 years. Malnourishment and disease are common; and poor health and education outcomes frequent. Vulnerability and food insecurity result from poor harvests and natural hazards. Social protection measures are limited. Access to customary land and support from community networks can act to mitigate poverty; however, these can also be a source of tension and conflict.

Data on poverty is lacking. The last Household Income and Expenditure Survey (HIES) was conducted in 2009/10, with a survey prior to that in 1996. According to the survey, 38% of the population was living below the internationally recognized extreme poverty line of $1.9 per day in 2010, which was worse than in 1996 (30%).[1]

Trends in gross domestic product per capita and revenue per capita

One measure by which to assess if poverty has fallen in recent years is to consider the growth trend in real gross domestic product (GDP) per capita, which was K8,294 ($2,566) per person in 2017. While GDP per capita does not indicate the wealth held by an individual, it can be a useful indicator to see if the country is economically producing more, or less, per person, where higher levels of production per person usually translate to improved living standards. GDP per capita will rise when the rate of economic growth exceeds population growth and fall with the opposite conditions. Data indicates that GDP growth has outstripped population growth on average over recent years: real GDP growth averaged 4.3% in the 5 years to 2018 and 5.5% in the 10 years to 2018, while population growth is estimated at 3.1% (based on the historical trend). This has resulted in an average annual increase in real GDP per capita of 2.5% over the 5 years to 2018, and an average increase of 2.8% in the 10 years to 2018. These growth rates in GDP per capita are comparable with other Pacific island countries (2.3% average growth rate over 2014–2019).

Table 2: Average GDP per Capita Growth Rates (%)

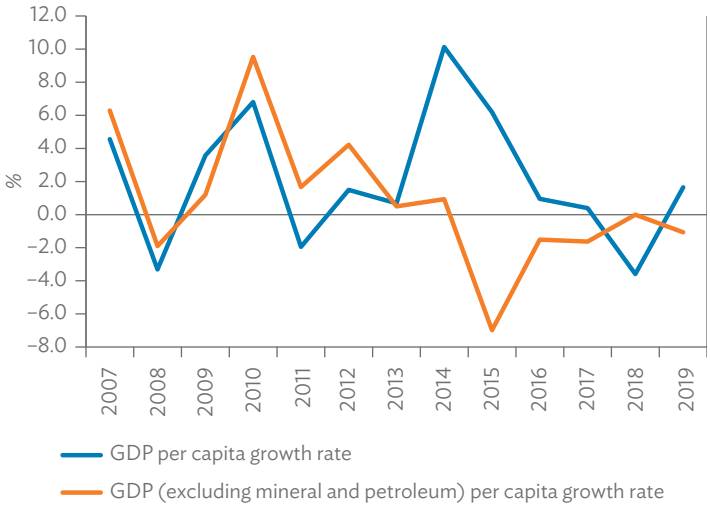
	10-Year Average (2009–2019)	5-Year Average (2014–2019)
Papua New Guinea – overall GDP	2.5	2.8
Papua New Guinea – GDP, excluding mining and petroleum	0.8	-1.8
Caribbean small states	-0.4	-0.4
Fragile and conflicted-affected situations	1.2	0.5
Pacific small island states	1.5	2.3

GDP = gross domestic product.
Sources: Papua New Guinea National Statistics Office, ADB estimates, World Bank.

However, much of the GDP growth in recent years has been driven by mineral and petroleum production, especially increased output of gold and liquefied natural gas. While some of the wealth generated trickles down to the larger population, for example through increased tax collection that in turn funds the government's provision of social services, much of it does not. Majority foreign ownership of resource projects also means that a large percentage of profits move offshore. Therefore, it is important to consider the trend in real GDP per capita, excluding mineral and petroleum production. This data shows a different picture: the average growth rate over the 10 years to December 2018 is only 0.8%, and the average growth in the 5-year period to December 2018 was -1.8% (Figure 14). This suggests a decline in living standards, with the rate of population growth outstripping the rate of economic growth. These average growth rates are more comparable with the Caribbean and small states (-0.4% over 5 years to December 2018) and fragile and conflict-affected countries (0.5% growth over 5 years to December 2018), a group which includes PNG.

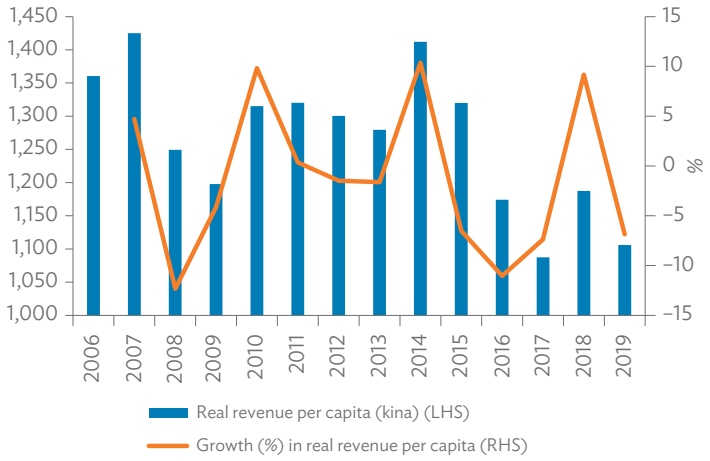
Another important trend to consider is the trend in government revenues per capita (Figure 15). If the rate of revenue growth exceeds population growth, then the government has more to spend per person. However, data here reveals a declining trend, falling on average in real terms by 0.2% over the 10 years to December 2018 and by 1.1% over 5 years to December 2018. The trend is even more stark looking at the average rate in the 5 years ending December 2019, which suggests an average annual decrease of -5% in real terms. This is a function of population growth exceeding revenue

Figure 14: Papua New Guinea Gross Domestic Product per Capita Growth Rates



GDP = gross domestic product.
Sources: Papua New Guinea National Statistics Office, ADB estimates.

Figure 15: Papua New Guinea Revenue per Capita



LHS = left-hand scale, RHS = right-hand scale.
Source(s): Papua New Guinea National Statistics Office; Department of Treasury.

growth: real revenue grew at an average rate of 2.9% over 10 years (to December 2018) and by 2.0% over 5 years (to December 2018).

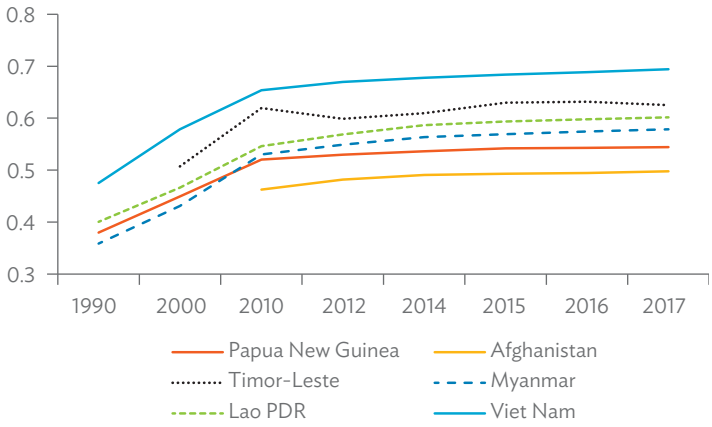
Jobs data and poverty reduction

Job creation is central to poverty reduction. Formal sector jobs were estimated at 360,732 in 2011, 10.8% of the overall labor force, with informal employment (86.5%) and the unemployed (2.6%) accounting for the balance. According to the Bank of Papua New Guinea's employment index, formal sector jobs are estimated to have remained static between 2011 and 2018, growing by only 0.4%. Estimates suggest that formal sector jobs grew to a peak of 397,667 in June 2013, which was during the liquefied natural gas construction phase, 10.2% higher than in 2011, but declined thereafter. This highlights the minimal contribution to poverty reduction from formal sector job creation. On the other hand, informal employment is estimated to have expanded by more than the rate of population growth in recent years, supported by continued government expenditure on infrastructure.[2]

Trends in human development indicators

By contrast, Human Development Index (HDI) indicators point to an improving trend in poverty reduction. PNG, whose HDI ranking is 157th, has seen the HDI improve to 0.544 in 2017 from 0.38 in 1990 (Figure 16). Aside from an increase in GDP per capita, which is one of the core components of the HDI, there has been also an improved trend in life expectancy: estimates indicate it has risen to 65.7 years in 2017, from 64.6 years in 2010, and 58.9 years in 1990 (Table 3). Expected years of schooling has also increased to 10 years in 2017, from 9.8 in 2010 and 4.7 in 1990. Other relevant indicators not included in the HDI calculation show similar trends; for example, the infant mortality rate has fallen, to 42.2 deaths per 1,000 births in 2017, from 49.8 in 2010 and 64.4 in 1990. Access to electricity has improved from 0.3% of the rural population in 1990, to 9.0% in 2010 and further to 15.5% in 2016. Mobile telephone subscriptions have jumped from 0.2% of the population in 2000, to 46.8% in 2017. However, the percentage of the population with access to improved drinking water sources has remained at 37% between 2000 and 2017, and the percentage of the population with access to improved sanitation has also remained static at 19% over the same time period.

Figure 16: Human Development Index, 1990–2017



Lao PDR = Lao People's Democratic Republic.
Source: United Nations Development Program (http://hdr.undp.org/en/data)

However, poverty reduction has not been equal, with urban areas, perhaps unsurprisingly, performing better than rural areas (Table 4). PNG's 2010 HIES indicates the Highlands and Momase regions, which are predominately rural, have the weakest outcomes. For example, the prevalence of stunting in children aged 5 years or younger, as recorded in the HIES, is 50% in rural areas, versus 35.3% in urban areas. Metropolitan areas (Lae and Port Moresby) have the lowest rate of stunting (34%), whereas the highest rates are in the Highlands (58%) and Momase (48.4%). Similarly, access to electricity is lowest in Momase (5.9% of the population) and the Highlands (11.2%), whereas the rate is highest in metropolitan

Table 3: Select Human Development Indicators for Papua New Guinea

	1990 (except where stated)	2000	2010	2017 (except where stated)
Gross domestic product per capita (2011 PPP $)	2,374	2,745	3,192	3,828
Human Development Index	0.38	0.449	0.52	0.544
Gender Inequality Index	-	0.666	0.665	0.741
Working poor at PPP$3.10 a day (% of total employment)	87.6 (1991)	83.7	68.9	46.8
Mortality rate, under-5 (per 1,000 live births)	88	77.2	65.5	54.3 (2016)
Mortality rate, infant (per 1,000 live births)	64.4	57.5	49.8	42.4 (2016)
Malaria incidence (per 1,000 people at risk)	-	285.4	194.7	179.4
Infants lacking immunization, measles (% of 1-year olds)	33	31	26	38
Life expectancy at birth, male (years)	56.2	64.4	-	68.3
Life expectancy at birth, female (years)	61.9	59.5	-	63.3
Population with at least some secondary education (% ages 25 and older)	11.7	12.4	11.1	12.2
Mean years of schooling (years)	2.3	3.3	4	4.6
Mobile phone subscriptions (per 100 people)	-	0.2	-	46.8
Unemployment, total (% of labor force)	3.0 (1991)	2.9	2.0	2.7
Unemployment, youth (% of ages 15–24)	5.5 (1991)	5.2	3.6	5.0
Rural population with access to electricity (%)	0.3	4.4	9.0	15.5 (2016)
Population using improved sanitation facilities (%)	-	18.7	18.6	18.6 (2015)
Population using improved drinking water sources (%)	-	36.7	36.6	36.6
Internet users, total (% of population)	-	0.8	1.3	9.6 (2016)
International inbound tourists ('000)	42 (1995)	58	140	184 (2015)

- = not available, PPP = purchasing power parity.
Source: United Nations Development Program, http://hdr.undp.org/en/data

areas (79.7%). Education statistics are similar, with only 10.2% of the population in Momase completing secondary education, compared with 27.2% in the Metropolitan areas, 38.9% in the Southern region, and 38.7% in the Islands.

Outcomes for women are worse than for men in PNG. The global Gender Development Index and the Gender Inequality Index continue to place PNG among the lowest-ranking countries in the world. The historical trend of the Gender Development Index indicates a fluctuating ranking with the latest estimate showing a worsening trend—from 0.530 (rank 110) in 2000, to 0.518 (rank 103) in 2003, then 0.521 (rank 103) in 2004, and finally 0.529 (rank 124) in 2005. The Gender Inequality Index, which provides more recent data, continues on a declining trend—from 0.682 in 2005, to 0.665 in 2010, and then 0.741 in 2017. No women hold parliamentary seats in PNG and only 9.5% of adult women have reached at least a secondary level of education compared with 15.0% of their male counterparts. In PNG, gender-based violence is considered endemic, pervasive, and common.

Conclusion

Analysis of data suggests mixed outcomes for poverty reduction. On the one hand, GDP per capita has increased, and there has been an improvement in some health and education outcomes, including the overall HDI. On the other hand, growth in GDP per capita, excluding mineral and petroleum production, has been weak and even negative. Growth in revenue per capita has also been negative. All of this leads to increased stress on service delivery, and is likely to have pushed poverty rates higher, especially in rural areas. The trend in formal sector job creation has also been very disappointing, below population growth.

Accelerating poverty reduction requires a multifaceted approach. Greater focus on family planning is needed to lower the rate of population growth, which would, in turn, increase the available government revenue per person. Continued investment in health and education is also needed to improve human capital outcomes. To generate quality and sustainable jobs, PNG needs

Table 4: Select Data from the 2009–2010 Household Income and Expenditure Survey Showing Regional Disparities in Papua New Guinea

	National	Rural	Urban	Metro	Southern	Highlands	Momase	Islands
Primary education (% of population)	32.3	32.8	28.9	27.2	38.9	27.3	33.5	38.7
Secondary education (% of population)	14.8	13.0	25.6	26.4	17.2	13.4	10.2	19.1
Tap water piped into household or community/village (% of population)	25.8	15.9	74.3	96.6	25.7	17.3	17.9	16.0
Population without flush toilet	88.3	97.2	44.7	35.1	86.1	64.5	97.4	91.9
Electricity from the grid	16.7	6.3	67.8	79.7	15.3	11.2	5.9	13.0
Ownership of refrigerator	8.8	2.7	46.1	57.6	7.6	3.4	4.5	8.6
Prevalence of stunting in children aged 5 or younger	48.2	50.0	35.3	34.0	41.1	58.0	48.4	39.1

Source: Papua New Guinea Household Income and Expenditure Survey, 2009-2010.

to attract sustained foreign investment, especially outside of the mineral and petroleum sector, and to complement that with sound macroeconomic policymaking. Women, who are an untapped engine of economic growth, also need to be significantly empowered in PNG.

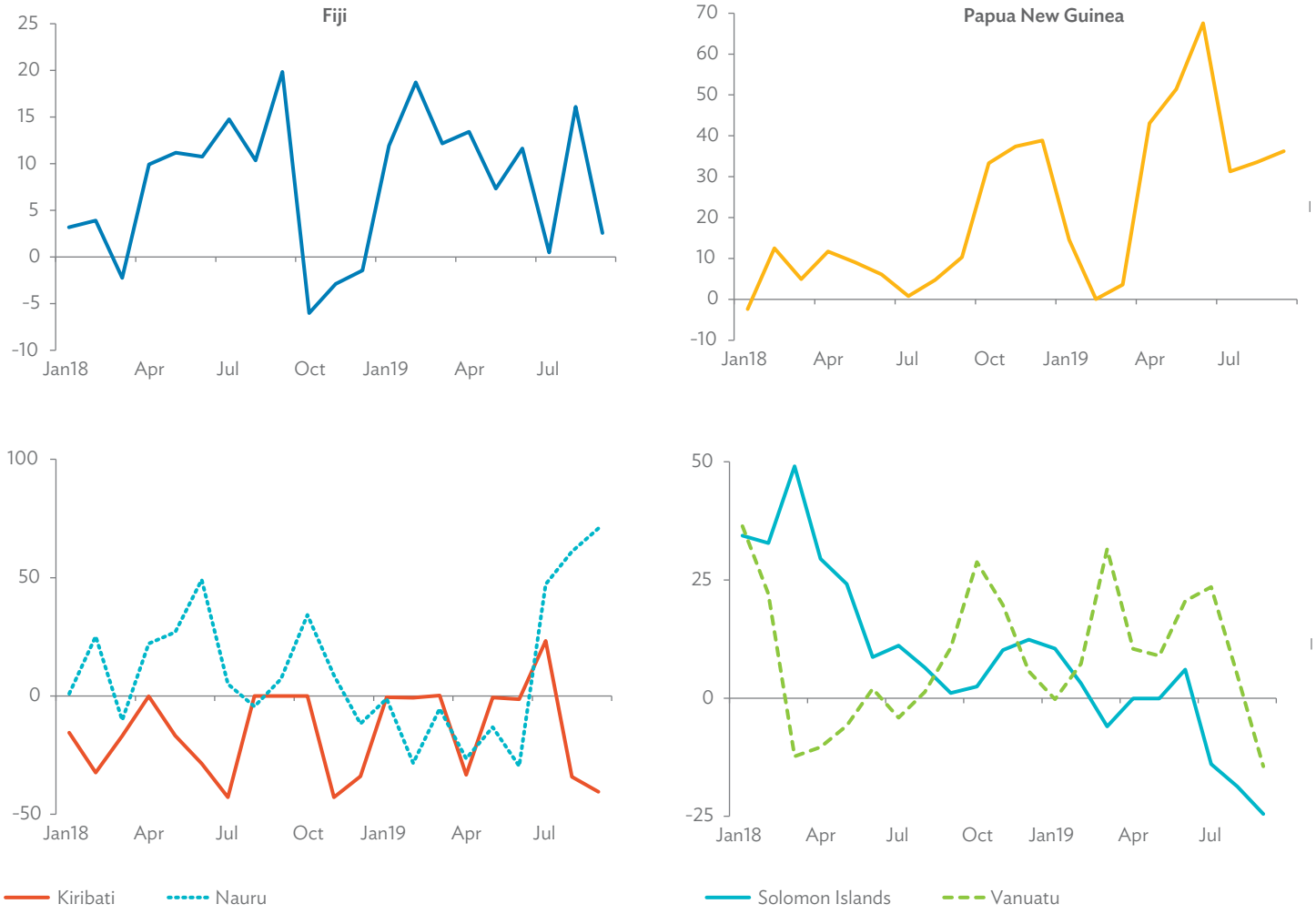
Lead author: Edward Faber and Magdelyn Kuari

Endnotes

[1] This compares to 46% in Sub-Saharan Africa and 24% in South Asia. Changing survey methodologies between 1996 and 2009 mean that a direct compassion is not possible.

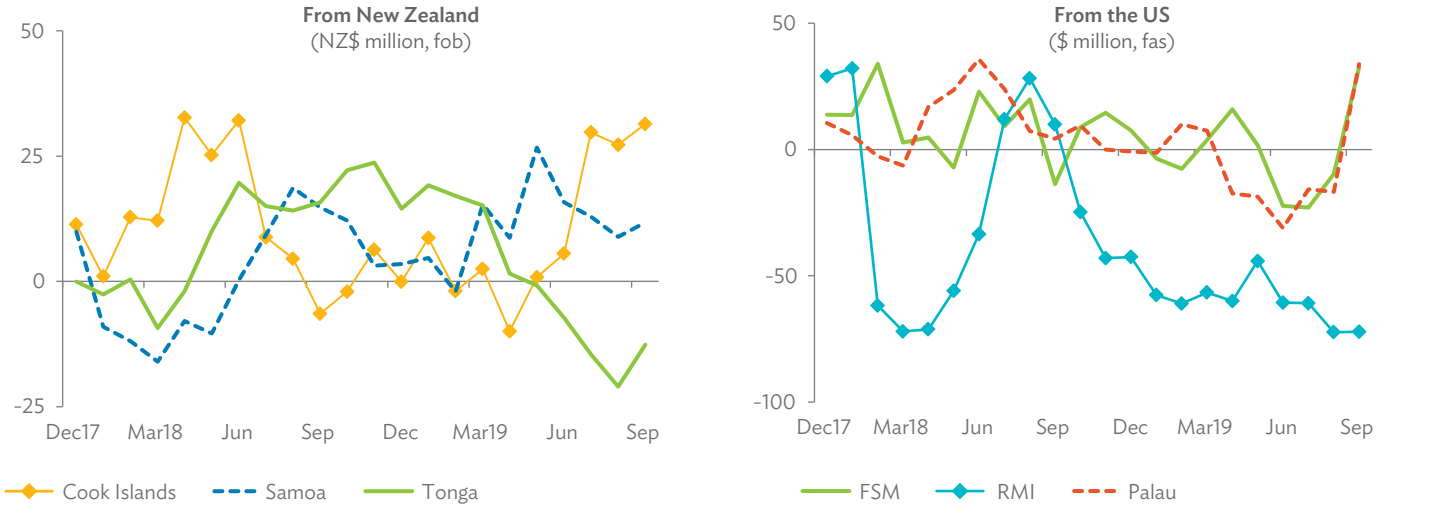
[2] ADB. 2019. *Pacific Economic Monitor*. Manila (July).

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



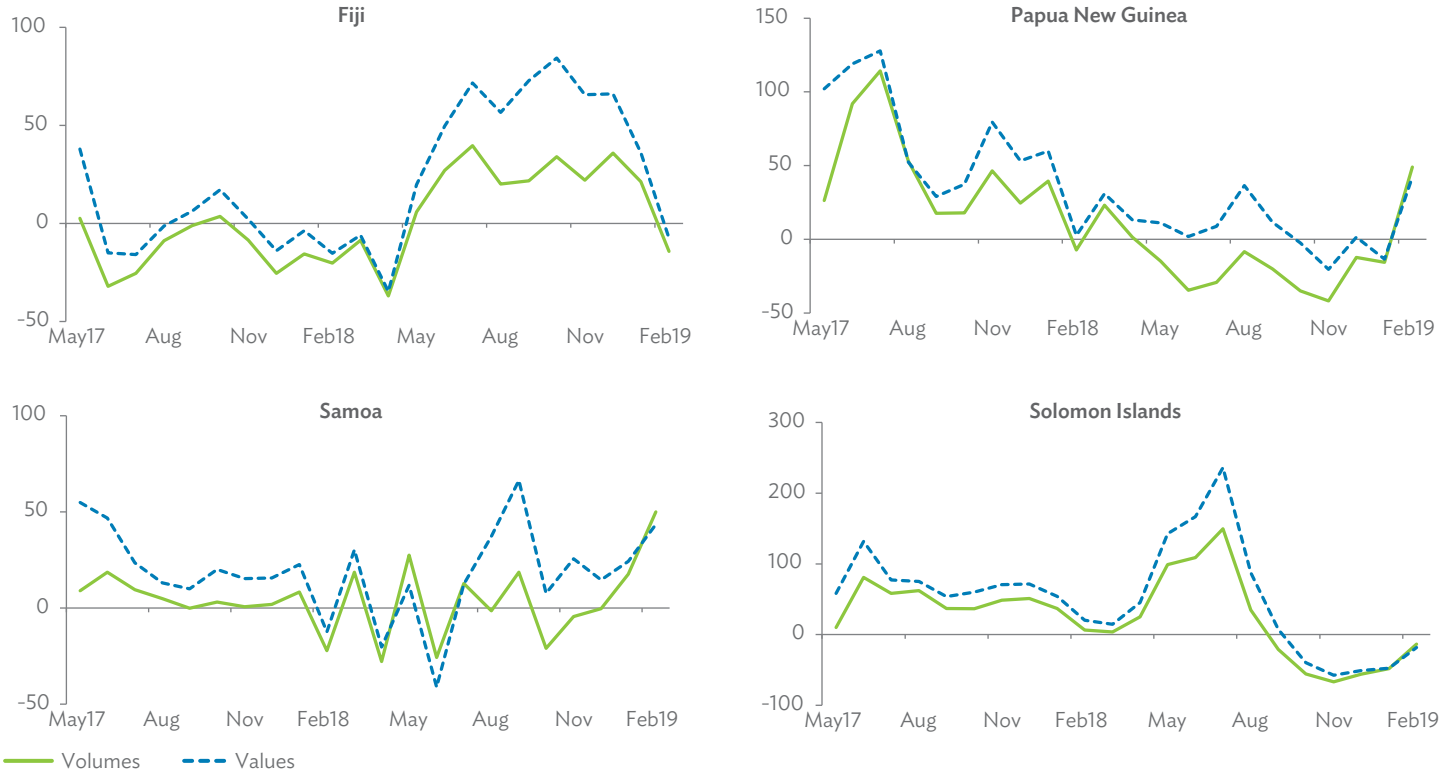
A$ = Australian dollars, lhs = left-hand scale, m.a. = moving average, rhs = right-hand scale, y-o-y = year-on-year.
Source: Australian Bureau of Statistics.

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



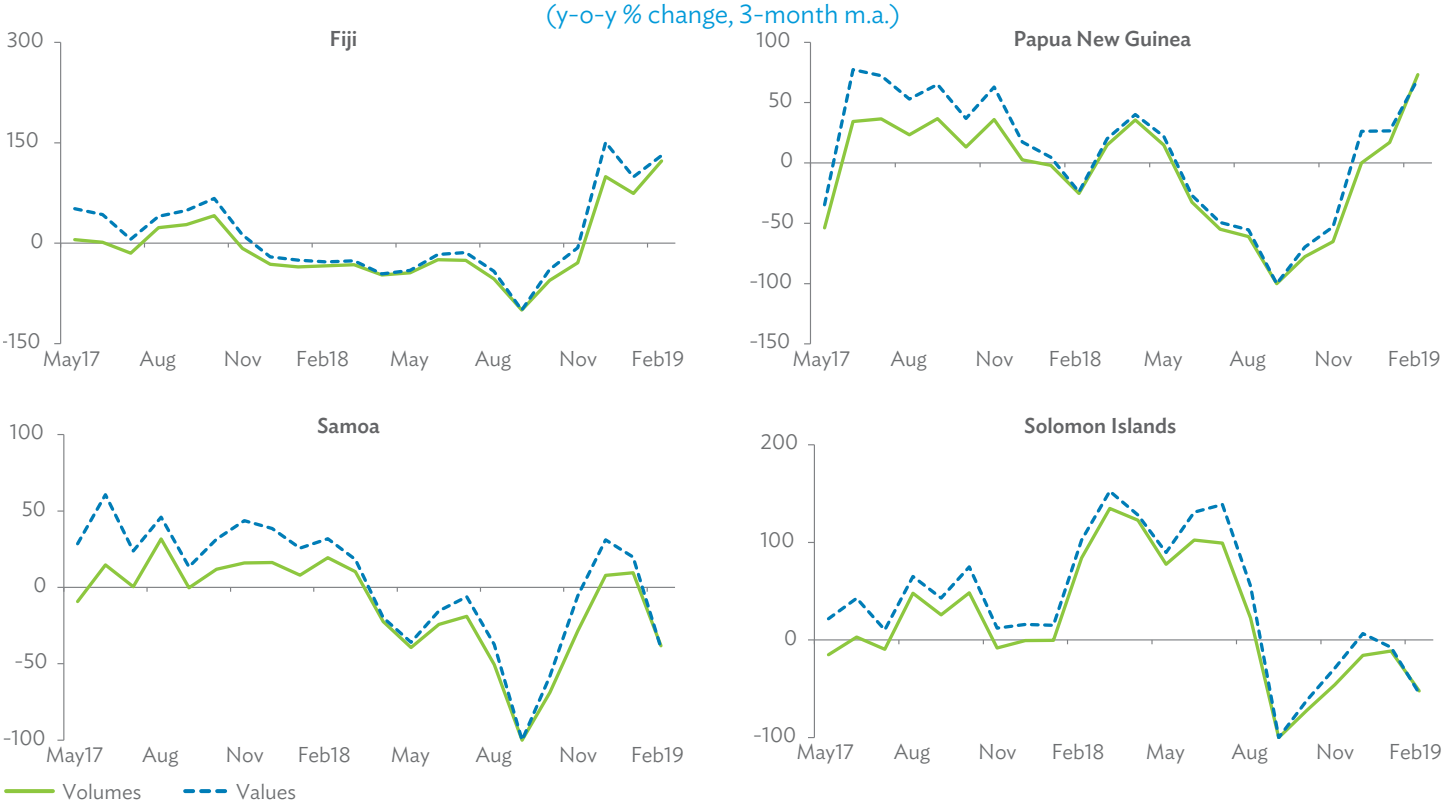
fas = free alongside, fob = free on board, FSM = Federated States of Micronesia, m.a. = moving average, NZ$ = New Zealand dollar, RMI = Republic of the Marshall Islands, US = United States, y-o-y = year on year.
Sources: Statistics New Zealand and US Census Bureau.

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



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.)

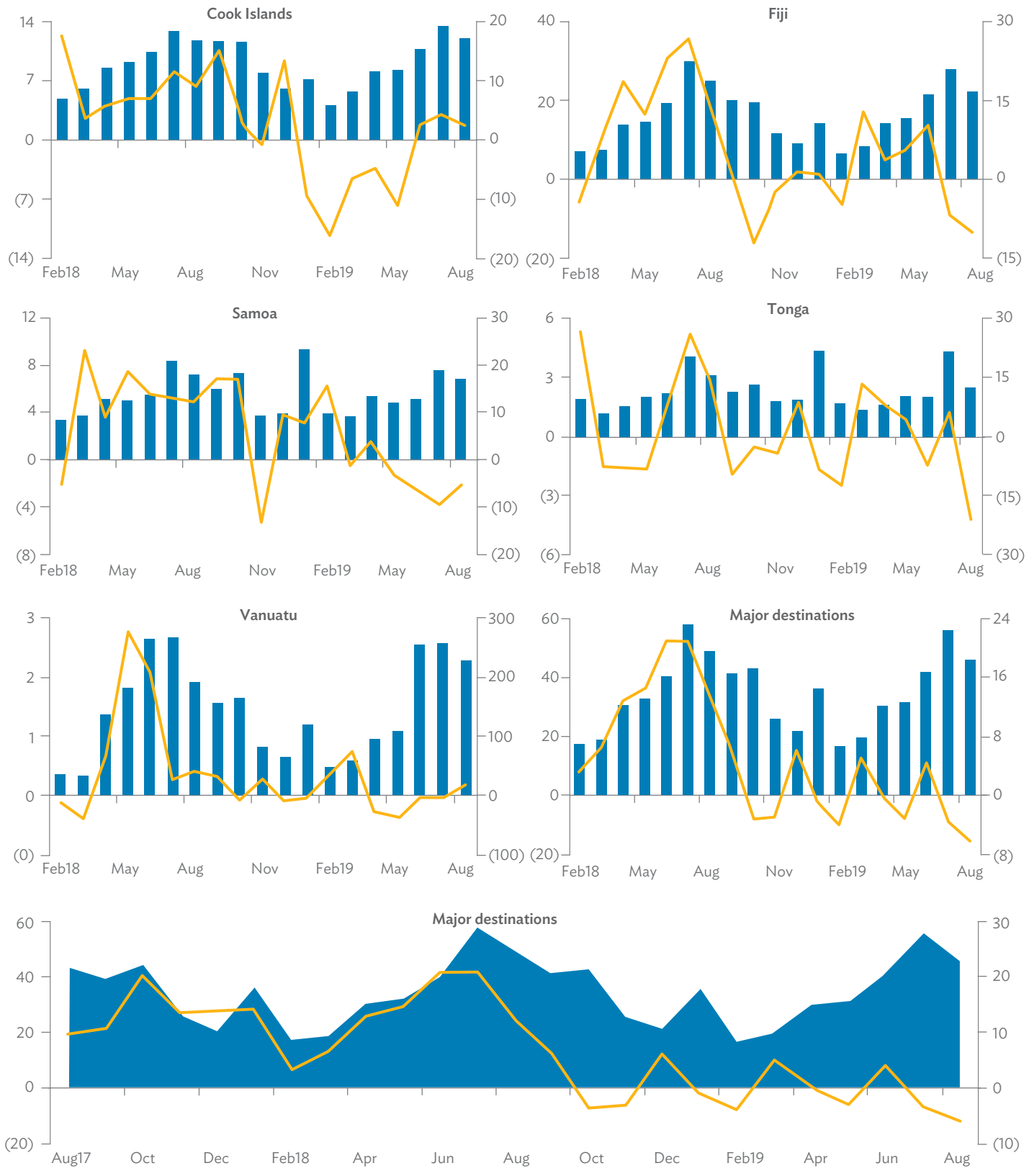


m.a. = moving average, y-o-y = year on year.
Source: International Enterprise Singapore.

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	-0.2	1.5	4.0	1.7	-1.4
FSM	0.4	2.7	2.5	1.4	0.7	1.5	10.0	7.0	10.0
Fiji	3.5	1.7	2.5	4.1	2.0	2.5	-4.3	-3.3	-2.7
Kiribati	2.3	2.3	2.3	2.1	2.3	2.2	-20.1	-23.2	-20.8
Marshall Islands	2.5	2.3	2.2	0.8	0.5	1.0	2.6	2.2	3.0
Nauru	-2.4	-0.5	0.1	3.8	2.5	2.0	14.2	4.9	0.2
Palau	1.5	-0.5	1.0	2.0	1.0	2.0	6.5	2.0	0.6
PNG	-0.6	4.8	2.1	4.7	4.0	3.8	-2.5	-2.7	-1.7
Samoa	-2.2	2.5	3.5	3.7	2.2	2.0	0.1	-0.2	-1.2
Solomon Islands	3.8	2.8	2.7	3.5	2.0	3.0	-0.6	-1.2	-2.2
Timor-Leste[a]	-0.5	4.8	5.4	2.1	1.9	2.5	-4.8	-25.9	-26.2
Tonga	0.4	1.6	2.5	5.3	3.5	3.3	3.0	1.4	0.9
Tuvalu	4.3	4.1	4.4	1.8	3.4	3.5	33.9	-1.1	1.8
Vanuatu	3.2	3.0	2.8	2.3	2.0	2.2	4.1	1.0	-1.0

FSM = Federated States of Micronesia, GDP = gross domestic product, p = projection, PNG = Papua New Guinea.
[a] Timor-Leste GDP is exclusive of the offshore petroleum industry. Niue joined ADB in March 2019 while Timor-Leste was moved to Southeast Asia subregional grouping in October 2019. These changes will be reflected in July 2020 Pacific Economic Monitor.
Sources: ADB. 2019. *Asian Development Outlook 2019 Update.* 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

How to reach us: pacmonitor@adb.org

Asian Development Bank
Pacific Department

Apia
Level 7 Central Bank Building
Apia, Samoa
Tel: +685 21900/34340

Funafuti
Ministry of Finance and
Economic Development
2nd Floor, Government Building
Vaiaku, Funafuti, Tuvalu
Tel: +688 20408

Honiara
Level 1, Heritage Park Commercial
Building,
Mendana Avenue
Honiara, Solomon Islands
Tel: +677 23333

Koror
2nd Floor Room 201
PRA Professional Building
Koror, 96940 Palau

Majuro
c/o The Marshall Islands Resort Hotel
P.O. Box 3279, Mieco Beach Front
Amata Kabua Boulevard
Majuro, MH 96960, Marshall Islands
Tel: +692 625 2525

Manila
6 ADB Avenue, Mandaluyong City
1550 Metro Manila, Philippines
Tel: +63 2 632 4444

Nuku'alofa
Suite 3, Level 3, Reserve Bank Building,
Salote Road, Kolofo'ou, Nukua'lofa Tonga

Palikir
P.O. Box PS-158, Palikir, Pohnpei 96941
Federated States of Micronesia
Tel: +691 320 2639

Port Moresby
Level 3–Burns Philip Haus
Corner of Musgrave Street and Champion Parade
P.O. Box 1992
Port Moresby, National Capital District
Papua New Guinea
Tel: +675 3210400

Port Vila
Level 5 Reserve Bank Building
Rue Emile Mercet, P.O. Box 3221
Port Vila, Vanuatu
Tel: +678 23610

Rarotonga
Ministry of Finance and
Economic Management
P.O. Box 120, Rarotonga
Cook Islands
Tel: + 682 29521

Suva
5th Floor, Ra Marama Building
91 Gordon Street
Private Mail Bag, Suva, Fiji
Tel: +679 331 8101

Sydney
Level 20, 45 Clarence Street
Sydney, NSW Australia 2000
Tel: +612 8270 9444

Tarawa
ADB-World Bank Liaison Office
P.O. Box 13, Bairiki
Tarawa, Kiribati
Tel: +686 22040/22041

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Asian Development Bank
6 ADB Avenue, Mandaluyong City
1550 Metro Manila, Philippines
Tel +63 2 8632 4444
Fax +63 2 8636 2444
pacmonitor@adb.org
www.adb.org/pacmonitor

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