DEALING WITH DISASTERS

Analyzing Vanuatu's economy and public finances through the lens of disaster resilience

Republic of Vanuatu: Country Economic Memorandum and Public Expenditure Review

WORLD BANK GROUP

Acknowledgement:
The team would like to acknowledge and thank all those who provided input to this analysis. The lead authors are Lodewijk Smets, Lachlan McDonald, Alief Rezza, Rashad Hasanov, Matthew Dornan, Kristie Petrou, Dung Doan, Kenia Parsons, Nikola Kojucharov, Becky Last, Jessica Wilson, Animesh Shrivastava, Janet Gamarra, Michael Osborne, Wayne Irava and Kenslyne Lele. Virginia Horscroft, Darian Naidoo, Jewelwayne Salcedo Cain, Peter Wallace, Georgina McArthur, Andrew Ragatz, Ryoko Tomita, Son Thanh Vo, Moritz Piatti, Drik Heine, and Artessa Saldivar-Sali provided valuable analytical support and feedback. The team is grateful to the government and stakeholders for their cooperation in providing data and to Leisande Otto for facilitating the exchanges with the authorities. The team would like to thank Hassan Zaman, Lars Moller, Ndiame Diop, Michel Kerf, Paul Vallely, David Gould, Annette Leith and Kim Edwards for providing overall guidance as well as the peer reviewers for useful feedback and suggestions. Angela Takats edited the report and Laframboise Design provided graphic design services.

Cover photo:
World Bank/2021

DEALING WITH DISASTERS

Analyzing Vanuatu's economy and public finances through the lens of disaster resilience

Republic of Vanuatu: Country Economic Memorandum and Public Expenditure Review

TABLE OF CONTENTS

List of figures

List of tables

List of boxes

Abbreviation list

ADB	Asian Development Bank
CEM	Country Economic Memorandum
CHS	Community Health Services
CNFC	China National Fisheries Corporation
CNO	Crude coconut oil
COPSL	Coconut Oil Production Santo Limited
DARD	Department of Agriculture and Rural Development
DFAT	Department of Foreign Affairs and Trade
DMS	Debt Management Strategy
DPs	Development Partners
DRM	Disaster Risk Management
ECCE	Early Childhood Care and Education
ECP	Economic Citizenship Program
EEZ	Exclusive Economic Zone
EM-DAT	Emergency Events Database
FAO	Food and Agriculture Organization
FSA	Farmer Support Association
GDP	Gross Domestic Product
GER	Gross Enrolment Rate
GFC	Global Financial Crisis
GIR	Gross Intake Rate
GNI	Gross National Income
GoV	Government of Vanuatu

HAP	Health Aid Post
HCI	Human Capital Index
HIES	Household Income and Expenditure Survey
ICT	Information, Communications and Technology
IFMIS	Integrated Financial Management Information System
IMF	International Monetary Fund
MALFFB	Ministry of Agriculture, Livestock, Forestry, Fisheries and Biosecurity
MoET	Ministry of Education and Training
MOH	Ministry of Health
MIS	Market Information System
MNCC	Malvatumauri National Council of Chiefs
MSG	Melanesian Spearhead Group
NCD	Non-Communicable Disease
NDMO	National Disaster Management Office
NER	Net Enrolment Rate
NIR	Net Intake Rate
NSDP	National Sustainable Development Plan
PDNA	Post-Disaster Needs Assessment
PEFA	Public Expenditure and Financial Accountability
PER	Public Expenditure Review
PFM	Public Financial Management
PICs	Pacific Island Countries
PLS	Pacific Labour Scheme
RBD	Refined, bleached, and deodorized coconut oil
RBF	Refined Biofuel
RBV	Reserve Bank of Vanuatu
RSE	Recognised Seasonal Employment
SMEs	Small and Medium Enterprises
SPFC	South Pacific Fishing Company
STR	Student-to-teacher ratio
SWP	Seasonal Workers Programme
TC	Tropical Cyclone

UNCTAD	United Nations Conference on Trade and Development
UNICEF	United Nations International Children's Emergency Fund
UNWTO	United Nations World Trade Organization
URA	Utilities Regulatory Authority
VARTC	Vanuatu Agriculture Research and Technical Centre
VAT	Value Added Tax
VBS	Vanuatu Bureau of Standards
VCMB	Vanuatu Commodities Marketing Board
VCO	Virgin coconut oil
VHW	Village Health Workers
VISIP	Vanuatu Infrastructure Strategic Investment Plan 2015-2024
VNSO	Vanuatu National Statistics Office
VOCGA	Vanuatu Organic Cocoa Growers Association
VPPA	Vanuatu Primary Producers Authority
VSS	Voluntary Sustainability Standards
VSTAP	Vanuatu Strategic Tourism Action Plan
WB	World Bank
WHO	World Health Organization
WTTC	World Travel and Tourism Council

EXECUTIVE SUMMARY

1. ***Dealing with disasters: Analyzing Vanuatu's economy and public finances through the lens of disaster resilience*** **(the report), provides a selected analysis of Vanuatu's economy and public finances, emphasizing the lens of disaster resilience.** It draws upon the analysis and tools from two core World Bank diagnostic products—the Country Economic Memorandum (CEM) and Public Expenditure Review (PER)—while bringing the depth and breadth of the analysis to scale with country context and key constraints. In terms of the economic analysis, the report first examines the country's recent economic performance, followed by an analysis of the agriculture sector, labor mobility, and the tourism sector. In terms of public expenditure analysis, the report first discusses overall fiscal trends and prospects, after which the overarching Public Financial Management (PFM) framework is analyzed. The report concludes with an analysis of public spending in the education and health sectors.

2. **The analysis shows that disasters are a defining feature of Vanuatu's economic performance, affecting key sectors such as agriculture, labor mobility, and tourism.** The report finds that Vanuatu's agricultural sector is stuck in a high-cost, low-productivity equilibrium, with disaster shocks affecting the sector's production capacity, assets, and supply chains. Several trends, however, have the potential to position the agricultural sector as a future driver of resilient growth. Reaping those opportunities requires increased access to production factors, information, and climate-resilient farming technologies. The report illustrates that labor mobility programs hold significant promise, despite the COVID-19 pandemic. Fully benefiting from labor mobility, however, requires a robust recruitment system and a good alignment between labor demand and supply. The tourism sector has been deeply affected by COVID-19 and natural disasters. The recent lockdown of the country has presented an opportunity for the government and private sector to take stock and identify pathways to re-orient Vanuatu's tourism industry to a more resilient model. To achieve this transition, an integrated set of public interventions will be needed.

3. **Natural disasters also affect the country's fiscal position and the efficiency of public spending in education and health.** The output losses created by disaster shocks reduce tax revenue, while post-disaster recovery involves multiple costs. According to the latest IMF/World Bank debt sustainability analysis, Vanuatu is considered at a moderate risk of debt distress. Repeated disasters may, however, lead to a deterioration of the country's fiscal position. In the education sector,

disasters have had a devastating impact on Vanuatu's learning facilities, destroying hundreds of schools leading to reduced school enrolment. With payroll crowding out spending on teaching supplies, it is unsurprising that such conditions have led to weak numeracy and literacy skills. To improve learning outcomes in Vanuatu, a number of priority actions should be considered, including increasing the stock of learning resources and improving the quality of teaching. To curb the damages of climate shocks, climate-resilient infrastructure is needed, while remote learning may help to continue education in a post-disaster setting. Similarly, natural disasters have had a major impact on Vanuatu's health sector. For instance, in 2015 Tropical Cyclone (TC) Pam caused serious damage to 39 health facilities and contributed to communicable disease outbreaks. Inefficiencies in hospital spending, low health worker density, and inequities in the provision of health care services pose further challenges to the health sector. Several measures may improve the functioning of the health sector, including a redistribution of health care workers, improved workforce planning, and actions to improve disaster resilience such as climate-resilient health infrastructure.

Country context

4. **Vanuatu is a small, remote, and dispersed economy, with limited opportunities for sustained economic growth.** The 300,000 residents of the Republic of Vanuatu live on an archipelago of 83 volcanic islands, of which 65 are inhabited. The land area is approximately 12,300 square kilometers, dispersed over an exclusive economic zone of about 663,300 square kilometers. Vanuatu's socio-geographic characteristics make economies of scale hard to achieve, while trade is limited to areas where natural resource rents outweigh the high costs of production. The country's environmental conditions, however, are supportive of tourism and agriculture, and labor mobility schemes have the potential to bring significant benefits to the country (World Bank, 2017).

5. **The country's recent growth experience has been marked by large exogenous shocks.** Vanuatu experienced an investment-led growth spurt in the years leading up to the Global Financial Crisis. After 2009, the investment boom waned and economic growth slowed to 2 percent per annum. The considerable damage wrought by TC Pam in 2015 led to a sharp decline in the rate of growth in that year. In the four years since the cyclone, reconstruction efforts have lifted the rate of growth to an annual average of 3.4 percent. In 2020, however, Vanuatu's post-cyclone recovery came to an abrupt end as the twin shocks of TC Harold and COVID-19 disrupted economic activity. Looking forward, it will be important for the country to improve resilience to shocks and increase productivity.

6. **Generally, the Government of Vanuatu (GoV) adopts a conservative fiscal stance, but spending has increased in the latter half of the last decade.** As a result of low revenues and a conservative fiscal stance, overall expenditure averaged only 25 percent of GDP during the period 2010–14, one of the lowest in the region. However, in the aftermath of TC Pam and due to windfall income from the country's Economic Citizenship Program (ECP), public spending increased significantly, including on an infrastructure development program. Higher-than-expected revenue from the ECP—which reached 16 percent of GDP in 2020, combined with lower-than-expected capital spending resulted in fiscal surpluses. Even in 2020, when the country was hit by the dual shock of TC Harold and COVID-19, a positive fiscal balance was achieved. Looking forward, given Vanuatu's vulnerability to natural disasters, it would be important to maintain adequate fiscal buffers, potentially financed by ECP revenues. Furthermore, the establishment of income tax would broaden the tax base and provide an additional source of revenue to cope with disaster shocks.

Disaster vulnerability

7. **Vanuatu is considered the most at risk of disaster from natural hazards among 181 economies worldwide (World Risk Report, 2020).** Due to its location in the South Pacific tropical cyclone basin and the Pacific Ring of Fire, Vanuatu experiences both hydrometeorological hazards (such as tropical cyclones, floods, and droughts) and geophysical events (such as volcanic eruptions, earthquakes, and tsunamis). Vanuatu has the highest probability among all Pacific countries of getting hit by a severe natural disaster.

8. **In 2020, Vanuatu was hit by the dual shock of TC Harold and COVID-19.** On April 6, 2020, TC Harold struck Vanuatu as a Category 5 tropical cyclone. Over 18,000 people were displaced and around 130,000 people were negatively impacted (almost half of the population). The tropical cyclone caused significant damage to infrastructure and the destruction of economic output. While suffering the consequences of TC Harold, the country also had to deal with the COVID-19 pandemic, a health-related disaster. With only a few confirmed cases of COVID-19, the economic impact nevertheless has been substantial. The pandemic has paralyzed Vanuatu's tourism industry, trade flows have been reduced—while Vanuatu's labor mobility programs have also been curtailed. With GDP falling by 10 percent in 2020, the combined impact of this dual shock on the country has been devastating.

9. **The effects of climate change may exacerbate the impacts of natural disasters, threatening fiscal sustainability.** Climate change is resulting in both rising temperatures and rising sea levels, which will likely aggravate the impacts of hydrometeorological events. While uncertain, the frequency of extreme weather events may also increase due to the effects of climate change. As a result, natural

disasters may affect Vanuatu's economic growth and fiscal sustainability even more than what has been historically observed. In a 'worst case' scenario of increased intensity and frequency of natural disasters, public debt would reach 75.3 percent of GDP by 2030, almost 13 percentage points higher than the counterfactual of a fully disaster-resilient scenario and well above the government's debt threshold of 60 percent.

10. **There is a need to increase the country's resilience to natural disasters.** Measures are needed to increase Vanuatu's disaster resilience so that disaster shocks have less of an impact on the economy and households—and so that public finances are well-adjusted to cope with the consequences of natural disasters. The report provides a selected analysis of Vanuatu's economy and public finances, through the lens of disaster resilience. In its economic analysis, the report focuses on agriculture, tourism, and labor mobility. In its public expenditure analysis—the overarching PFM framework, the education sector, and the health sector—are analyzed.

Agriculture (CEM)

11. **Agriculture directly influences the lives and livelihoods of the vast majority of ni-Vanuatu citizens.**[1] Agriculture is a critical source of food and income for the three-quarters of the population that live in rural areas and a good share of the urban population. The agricultural sector accounts for 21 percent of the domestic economy and plays an outsized role in Vanuatu's export of goods (around 75 percent of goods exports). Importantly, small-scale agriculture operates like an important informal safety net for households, underpins resilience to shocks, and is closely intertwined with the identity of many ni-Vanuatu.

12. **Vanuatu's agricultural sector is stuck in a high-cost, low-productivity equilibrium.** A variety of structural constraints limit productivity gains in the agricultural sector. Weak bureaucratic capacity inhibits the implementation of core governance functions, including limited coordination between relevant ministries. Smallness and remoteness, plus weak supply chains, make it inherently difficult and costly to transport goods around the country. Furthermore, a slew of supply-side constraints, including dislocation from financial services, limit the rate of growth in agriculture. In addition, disaster shocks affect the agricultural sector in several ways. These constraints discourage farmers from investing to improve the quality and diversity of production and discourage the private sector from improving agricultural supply chains.

[1] Ni-Vanuatu is a large group of closely related Melanesian ethnic groups native to the island country of Vanuatu.

13. **Several favorable trends, however, have the potential to position the agricultural sector as a future driver of resilient growth.** An expanding and maturing domestic market offers farmers an opportunity to increase sales of locally produced food. Growing international demand for premium and niche products derived from existing cash crops is also encouraging farmers to move up the value chain. Finally, the potential exists to link agricultural producers to rapidly growing market for biofuels.[2] Reaping these opportunities could turn the sector into an engine of inclusive growth while safeguarding it against the effects of climate change.

14. **Reaping the opportunities in the agricultural sector requires action at various levels.** At the farmer level, it is essential to support local food systems, boost productivity, and enhance nutrition. At the sectoral level, capacity building of relevant public institutions should be undertaken to upgrade extension services and training. Producers also need to get access to production factors, price information, and climate-resilient farming technologies. At the general government level, investments are needed to enhance financial inclusion, climate resilience and rural development. Finally, at the strategic level, the government needs to invest in emerging opportunities for value-added goods and services, including the support for Vanuatu's export commodities. The country's Agriculture Policy 2015–30 and the agriculture sub-sector strategies broadly reflect these actions and are thus important levers for policy implementation.

Labor mobility (CEM)

15. **Given limited job opportunities in the domestic market, labor mobility plays an important role in providing employment to ni-Vanuatu workers.** A large and increasing number of ni-Vanuatu have found seasonal jobs in New Zealand's and Australia's labor mobility programs. As a result, Vanuatu became the largest contributing country to two important labor mobility programs, accounting for 41 percent of all workers in 2018–19. The remitted income from overseas work supports the livelihood of labor sending households, who use the funds to cover the payment of basic food items and daily expenses, school fees, and health expenditures.

16. **The COVID-19 disaster has severely worsened the earnings of seasonal workers, leading to reduced wellbeing of labor sending households.** Nearly two-thirds of ni-Vanuatu seasonal workers in Australia and New Zealand experienced fewer work hours and lower earnings as compared to pre-COVID-19 times. As a result, the amount and frequency of remitted income fell, leading to income losses of labor sending households. Twenty-two percent of such households even reported losing all sources of income.

[2] Important to note, however, that investment in biofuels is not risk-free due to opportunity costs in land use and the existence of alternative sources of energy generation.

17. **Despite the COVID-19 pandemic, labor mobility programs hold significant promise.** Demand for seasonal labor from both Australia and New Zealand remains strong, while recent pilots demonstrate the possibility of supplying seasonal work that complies with quarantine and testing requirements. Furthermore, over the long term, the skills and experiences gained by ni-Vanuatu overseas have the potential to add to the productive and entrepreneurial capacity of the Vanuatu economy. The use of remittances and savings from labor mobility schemes could aid in responding to natural disasters, especially given the country's limited formal social protection system. However, there is also a need to further develop adaptive social protection mechanisms to complement established informal safety nets.

18. **Fully benefiting from labor mobility requires a robust recruitment system, a good match between labor demand and labor supply, and sound management of any unintended consequences.** Vanuatu is currently transitioning to a government-controlled recruitment model of seasonal workers. Accountable and transparent recruitment, selection, and processing—and constant dialogue with Australian and New Zealand employers and governments—will be essential. Furthermore, efforts should be made to align education and training with labor market demand. Finally, labor mobility and seasonal work may bring about unintended consequences, ranging from the crowding out of domestic labor supply, to negative social impacts (on women). Sound management of these unintended consequences will be important, to ensure the full benefits are realized from all participants and stakeholders.


Credit: Laszlo Mates / Shutterstock.com

Tourism (CEM)

19. **The tourism industry is a mainstay of Vanuatu's economy but has been deeply affected by 2020 events.** According to the World Travel and Tourism Council, tourism and travel contributed 34.7 percent to GDP and 67.3 percent of total exports in 2019. In response to the COVID-19 pandemic, Vanuatu declared a state of emergency, leading to a virtual standstill of the tourism industry. In terms of travel, domestic flights were suspended, and international borders closed to visitors since mid-March 2020. Furthermore, TC Harold caused significant damage to tourism assets in the Samna province, which normally captures the second largest share of visitor spending in the country.

20. **The COVID-19 pandemic presents an opportunity to re-orient Vanuatu's tourism industry to a higher value-added and more resilient model.** While Vanuatu may benefit from an early rebound in proximate markets (once protocols for border re-opening and health risk management are established), the composition of tourism demand will likely differ from its pre-COVID-19 configuration, especially in cruise ship tourism. The changing demand landscape presents an opportunity for Vanuatu to re-orient to a higher value-added and more resilient tourism model, involving quality over quantity of tourists, the development of niche markets, and increased visitor dispersion.

21. **To achieve a transition towards a new tourism model, an integrated set of public interventions is needed.** First, climate-resilient capital investments in tourism-enabling infrastructure are required to improve existing assets and develop new ones. Second, Vanuatu needs to invest in emergency preparedness and response to enable long-term sustainable growth of the tourism sector. Third, re-focused marketing strategies and improvements in quality standards are essential to diversify the tourism market. Finally, beyond public investment, improvements in Vanuatu's business climate are needed to attract private investment. The Vanuatu Tourism Recovery Plan (2020–23) and the Vanuatu Tourism Investment Needs Assessment and Plan (2020–30)—which are broadly aligned with these recommendations—may prove useful policy tools to support the transformation towards a more sustainable and resilient tourism industry.

Public financial management (PER)

22. **Over the years, Vanuatu has made progress in developing its PFM framework, but weaknesses remain.**[3] The Public Financial and Economic Management (PFEM) Act of 1998 governs the country's public financial management. Core PFM elements have been established, but there is room for continued improvement. Basic procedures for the scrutiny of government expenditures exist, but implementation arrangements could be enhanced—especially for payroll control. Furthermore, a Procurement Act was passed, but putting procurement legislation into practice has been challenging. Finally, even though the government developed a medium-term debt management strategy, overseeing the fiscal risk remains a challenge for the government.

23. **A legal framework for disaster risk management has been established, but PFM arrangements to govern disaster situations could be strengthened.** The National Disaster Act of 2000 and the Disaster Risk Management Act of 2019 form the legal basis to manage natural disasters. Ensuing from the legal framework, coordination mechanisms and funding instruments have been established in the country. Emergency procurement regulations and the incorporation of disaster risk management and response in the national budget planning could be improved.

Education (PER)

24. **Vanuatu has a dual education system, with mostly government managed schools.** The formal education system comprises early childhood development, primary school, and secondary school. At the lower levels of education, the language of instruction is mostly a vernacular language spoken in the village. By the end of the year 3, however, the language of instruction should be either French or English. The Ministry of Training and Education (MoET) is responsible for delivering key education outcomes and manages the large majority of primary and secondary schools in Vanuatu.

[3] The country's PFM reform roadmap 2017–21 aims to address some of these challenges.

25. **Education spending in Vanuatu is in line with its income peers, but the country underperforms in educational outcomes.** In 2019, Vanuatu spent on average US$142 per capita on education, which is broadly in line with countries at a similar income level. Compensation of employees accounts for the largest share of recurrent expenditure. This has crowded out spending on teaching supplies, resulting in very low textbook-to-student ratios. Teacher performance issues combined with low participation rates and the impact of natural disasters have led to weak numeracy and literary skills in the country, especially for the most disadvantaged.

26. **Several actions are needed to improve learning outcomes in Vanuatu.**[4] To improve the efficiency of education spending, priority must be given to increase the stock of learning resources. Improving teacher management—including teacher monitoring and training—could lead to better value for money. Parental awareness, financial support, and transportation assistance may help in improving equitable access and participation to education in Vanuatu. Finally, while natural disasters cannot be averted, necessary mitigation and prevention measures are needed to curb damage to learning infrastructure and educational outcomes.

Health (PER)

27. **The health care system in Vanuatu is managed by the Ministry of Health (MOH).** The MOH operates a network of facilities across the country which provide health care services. The facilities are mainly hospitals, health centers, and dispensaries. The government-owned facilities are supplemented by a small private health sector, church-based health facilities, and Health Aid Posts (HAPs). Together, these facilities provide four levels of health care: (i) community care, largely provided by the HAPs; (ii) primary health care, provided at the health center level; (iii) secondary health care provided at provincial hospitals; and (iv) tertiary health care provided at two referral hospitals.

28. **Health spending is low compared to peer countries, but Vanuatu outperforms both comparator groups in terms of health outcomes.** In 2018, Vanuatu spent on average US$82 per capita on health, which is low compared to both regional (Pacific and Caribbean) and income peer countries. In terms of allocation, hospital payroll consumes the largest share of health expenditures. Very low bed occupancy rates, however, suggest large inefficiencies in hospital spending. Furthermore, health worker density in Vanuatu is low, leading to inequities in the provision of health care services. Next, natural disasters pose a continuous risk on the performance of the country's health sector. Despite these inefficiencies, Vanuatu performs relatively well in terms of health outcomes, with a life expectancy that is higher than what one would expect based on its per capita health spending.

[4] The proposed recommendations are broadly in line with the Vanuatu Education and Training Sector Strategic Plan (2020–30).

29. **Several measures may improve the functioning of the health sector in Vanuatu.** First, a reallocation of resources away from hospitals towards other levels of health care—including preventative measures to control non-communicable diseases—may be considered. Second, there is a need to review and evaluate the entire human resource strategy, including workforce and succession planning, budgeting and remuneration, and training of health care workers. Finally, the distribution of health workers across provinces and across facilities should be reviewed, such that equitable provision of health care services can be achieved.

Structure of report

30. **The remainder of the report is structured as follows.** Section 1 provides a brief overview of the country context. Section 2 analyzes Vanuatu's vulnerability to natural disasters, the implications of climate change, and the consequences of the COVID-19 pandemic (a biological disaster). It examines the impact of natural disasters on Vanuatu's economic growth and fiscal position. Section 3 presents recent economic trends and prospects. It analyzes the demand-side drivers of economic growth, and examines structural changes and productivity trends. Section 4 discusses Vanuatu's agricultural sector, which influences the livelihoods of the vast majority of ni-Vanuatu citizens. It highlights a number of important constraints but also opportunities for growth. Section 5 focuses on the country's labor mobility programs. It analyzes the impact of COVID-19 on seasonal workers and discusses challenges and opportunities of Vanuatu's labor mobility schemes. Section 6 gives an overview of Vanuatu's tourism sector, a mainstay of the economy. It shows how the tourism industry has been affected by TC Harold and COVID-19, and presents opportunities for the sector in a post-COVID world Section 7 investigates recent fiscal trends and prospects, describing the overall fiscal context, the evolution of public debt, and key elements of the budgeting process. It examines trends in revenue and expenditures, while concluding with fiscal prospects and challenges. Section 8 presents a succinct overview of the country's PFM framework, with a specific focus on disaster resilience. It discusses core PFM elements and the country's disaster risk management framework. The section offers a number of suggestions to make the country's PFM practices more disaster-resilient. Finally, given the impact of natural disasters on human capital, the report ends in sections 9 and 10 with an analysis of spending in the education and health sectors. Section 9 elaborates on how disasters affect learning and educational infrastructure and analyzes spending in the education sector. The section also highlights how key challenges have led to low numeracy and literacy skills. Finally, Section 10 provides an overview of spending in the health sector, indicating that despite disparities in public expenditure, the country performs relatively well in terms of health outcomes. The section concludes with measures to improve the functioning of the health sector in Vanuatu.

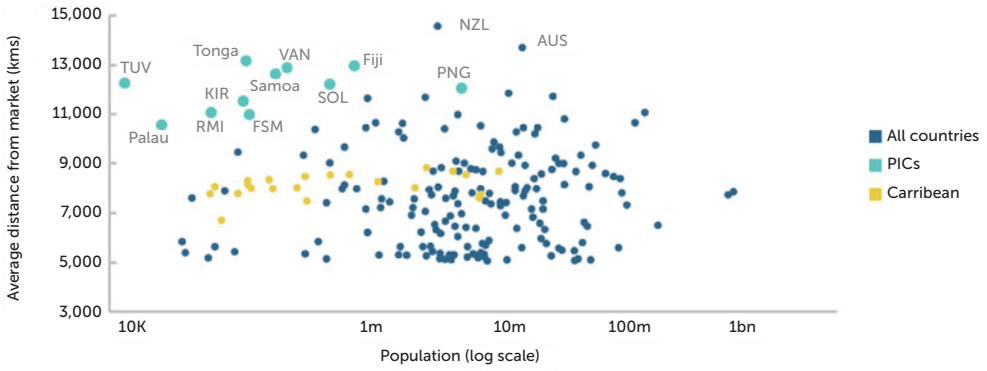
SUMMARY OF RECOMMENDATIONS

Objective	Recommendation
	Fiscal stability
Improve disaster resilience	Consider using part of ECP revenues to maintain fiscal buffers
Broaden tax base	Consider establishing a personal and corporate income tax
	Agriculture
Increase productivity	Consider improving producer access to production factors, price information, and climate-resilient farming technologies
Promote economic growth	Consider supporting the growth of Vanuatu's export commodities, in particular coconut-based products, cocoa, and kava
	Labor mobility
Improve income opportunities	Consider establishing a transparent and accountable recruitment model, based on constant dialogue with labor receiving countries and employers
Improve household welfare	Consider actively managing unintended consequences of labor mobility programs
Improve disaster resilience	Consider exploring complementarities between traditional support to families and government-led adaptive social protection programs
	Tourism
Improve disaster resilience	Consider climate-resilient capital investments in tourism-enabling infrastructure and assets
Improve emergency preparedness	Consider investing in emergency preparedness and response mechanisms (for example, a multi-hazard early warning system)
Increase diversification	Consider re-focused marketing strategies, improvements in quality standards and the development of an adventure travel market
	Public financial management
Improve disaster resilience	Consider developing emergency procurement regulations and incorporating disaster risk management and response in the national budget planning
	Education
Improve efficiency of education spending	Consider increasing the stock of learning resources, including teaching supplies in the vernacular language
Improve value for money	Consider improving teacher management
Improve equity	Consider raising parental awareness, improving financial support and transportation assistance
Improve disaster resilience	Consider implementing measures to curb damages to learning infrastructure
	Health
Improve value for money	Consider reviewing and evaluating the human resource strategy
Improve equity	Consider reviewing the distribution of health workers across provinces and health care types

1. Introduction

31. **Vanuatu is a small, remote, and dispersed economy, sharing the geographic characteristics of other Pacific Island Countries (PICs).** The 300,000 residents of the Republic of Vanuatu live on an archipelago of 83 volcanic islands, of which 65 are inhabited (see Annex 1 for a map of the country). Port Vila is the country's capital, located in the Shefa province and home to about 66,000 inhabitants. Seventy-five percent of the population, however, lives in rural areas. The land area is approximately 12,300 square kilometers, dispersed over an exclusive economic zone of about 663,300 square kilometers. Its smallness and remoteness set Vanuatu—and the other Pacific Islands countries (PICs)—apart from other economies, including small islands states in the Caribbean (see Figure 1-1). Despite the geographic similarities with the other PICs, Vanuatu's per capita income reached US$3,168 in 2019, below the Pacific average of US$4,264.

Figure 1-1: Smallness and remoteness of Pacific Island Countries



Source: World Bank (2017)

32. **The combination of smallness, remoteness, and dispersion limits economic opportunities and raises the cost of providing public goods.** On its own, smallness means that economies of scale and agglomeration effects are much harder to achieve in the production of non-tradable goods and services. Furthermore, constraints to trade arising from Vanuatu's remoteness mean that imported inputs tend to be more expensive, while the costs of exporting to the rest of the world are higher. As a consequence, Vanuatu is only competitive in areas where natural resource rents outweigh the high costs of production. Adding to the geographic features, Vanuatu's highly dispersed population, scattered across 65 islands, makes the cost of providing basic public goods relatively high.

33. **Vanuatu has room to make further progress on important human development dimensions.** Vanuatu ranks at position 140 out of 189 countries on the Human Development Index (HDI), below the average for countries in East Asia and the Pacific. While the country has made progress on healthy living, access to knowledge, and the standard of living in the past three decades,[5] room for further improvement exists. For instance, according to the World Bank's Human Capital Index, a child born in Vanuatu today will be 45 percent as productive when they grow up compared to what they would have been if they enjoyed complete education and full health. This is lower than the average for East Asia and Pacific and lower middle-income countries. The gap in human development is evident in poor schooling outcomes, as the country scores in the lower quartile worldwide on harmonized testing. Furthermore, almost 30 percent of the children are stunted—and therefore at risk of cognitive and physical limitations, indicative of impaired health outcomes.

34. **Vanuatu is extremely vulnerable to various natural disasters, due to its location in the South Pacific tropical cyclone basin and the Pacific Ring of Fire.** Vanuatu experiences both hydrometeorological hazards (cyclones, floods, and droughts) and geophysical disasters (volcanic eruptions, earthquakes, and tsunamis). Between 1980 and 2020, 40 natural disasters were recorded for Vanuatu in the Emergency Events Database (EM-DAT), including 20 tropical storms, two flooding events, eight earthquakes and 10 other disasters, mostly volcanic eruptions.[6] For instance, in March 2015, TC Pam struck 22 of Vanuatu's islands, causing economic losses estimated at 64 percent of GDP. Apart from disrupting livelihoods, causing human suffering, and bringing persistent and harmful consequences to human development—particularly for the poor and most vulnerable—disasters also have immediate and long-term adverse impacts on macro-fiscal outcomes.

35. **Despite these constraints, growth opportunities do exist for Vanuatu.** Fundamental environmental conditions are supportive of tourism and agriculture in Vanuatu. As such, both sectors account for a large share of the domestic economy. The agricultural sector accounted for 21 percent of GDP in 2017, while the tourism sector contributed an estimated 30 percent of GDP.[7] Furthermore, both tourism and agriculture have a high potential of driving economic growth in Vanuatu over the next 20 years. For instance, productivity increases in agriculture could generate 0.5 percent more in annual growth for the country, while the tourism industry could unlock 1.3 percent in additional growth. Expanding the existing labor mobility schemes could bring significant benefits to the country (World Bank, 2017).

[5] Between 1990 and 2019, Vanuatu's life expectancy at birth increased by 5.7 years, mean years of schooling increased by 0.6 years and expected years of schooling increased by 1.6 years. Vanuatu's GNI per capita increased by about 8.8 percent between 1990 and 2019.

[6] All the natural disasters included in EM-DAT satisfy one of the following criteria: (i) 10 or more people killed; (ii) 100 or more people affected; (iii) a declaration of a state of emergency; and (iv) a call for international assistance.

[7] Unsurprisingly, the manufacturing sector remains insignificant in the country, only contributing 3 percent of GDP in 2017.

36. **The country's growth experience has been marked by large exogenous shocks.** Vanuatu experienced an investment-led growth spurt in the years leading up to the Global Financial Crisis. After 2009, the investment boom waned and economic growth slowed to 2 percent per annum. The considerable damage wrought by Cyclone Pam in 2015 led to a sharp decline in the rate of growth in that year. In the four years since the cyclone, reconstruction efforts have lifted the rate of growth to an annual average of 3.4 percent. In 2020, Vanuatu's post-cyclone recovery came to an abrupt end as the twin shocks of TC Harold and COVID-19 disrupted economic activity.

37. **Generally, the Government of Vanuatu (GoV) adopts a conservative fiscal stance, but spending has increased in the latter half of the last decade.** As a result of low revenues and a conservative fiscal stance, overall expenditure averaged only 25 percent of GDP during the period 2010–14, one of the lowest in the region. However, in the aftermath of TC Pam and due to windfall income from the country's Economic Citizenship Program (ECP)—a passport selling scheme—public spending increased significantly, including on an infrastructure development program. Higher-than-expected revenue from the ECP combined with lower-than-expected capital spending resulted in fiscal surpluses, while the infrastructure pipeline was financed with concessional external loans.

38. **In 2020, Vanuatu was hit by the dual shock of TC Harold and COVID-19**. On April 6, 2020, TC Harold struck Vanuatu as a Category 5 tropical cyclone. Over 18,000 people were displaced and around 130,000 people were negatively impacted—almost half of the population. The tropical cyclone caused significant damage to infrastructure and the destruction of economic output. For instance, the loss to agricultural production was estimated at US$167 million. While suffering the consequences of TC Harold, the country also had to deal with the COVID-19 pandemic. With only three confirmed cases of COVID-19, the Government of Vanuatu has been successful in limiting the spread of the virus. The economic impact, however, has been substantial. The pandemic has paralyzed Vanuatu's tourism industry, trade flows have been reduced, and Vanuatu's labor mobility programs have also been curtailed. The combined impact of this dual shock on the country has been devastating. GDP is estimated to fall by 10 percent, while an overall deficit of 3.7 percent of GDP is expected.

39. **In Vanuatu, women and girls are more vulnerable to natural disasters and their impacts than men.** The experience of TC Pam, TC Harold, and COVID-19 has highlighted the distinct challenges and difficulties women face. In Vanuatu, women are generally the primary caregiver in the family and carry the main responsibility for household chores. Natural disasters tend to exacerbate this division of labor, resulting in an increased workload. Women are also leading the frontline health response to the COVID-19 pandemic. The majority of the key health responders are women, placing them at increased risk and exposure of infection.

40. **Measures are needed to increase Vanuatu's resilience to (natural) disasters.** The compound disaster shock of TC Harold and COVID-19 have made clear how vulnerable Vanuatu is to (natural) disasters. Furthermore, the effects of climate change and increased urbanization are likely to exacerbate the impacts of future disaster shocks. Measures are therefore needed to increase Vanuatu's disaster resilience, such that disaster shocks have less of an impact on the economy and its people and such that public finances are well-adjusted to cope with the consequences of natural disasters.

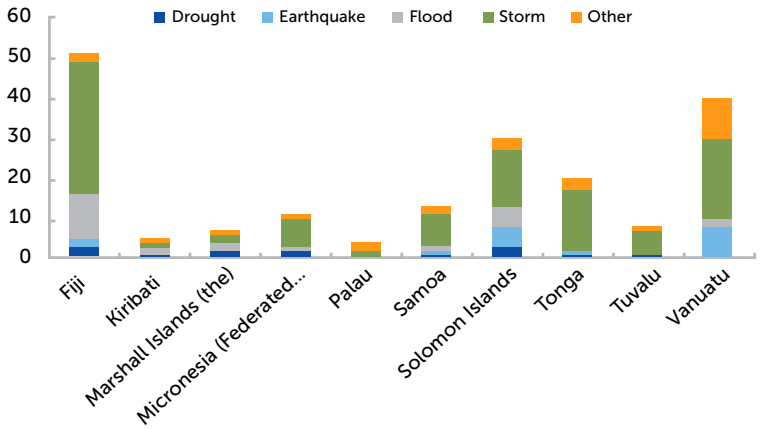
2. Disasters

41. **This section discusses the implications of (natural) disasters, with a focus on macro-fiscal impacts.** Section 2.1 analyzes the vulnerability of Vanuatu to natural disasters, the implications of climate change, and the consequences of the COVID-19 pandemic. Section 2.2 examines the impact of natural disasters on economic growth and the fiscal position, both in general and specifically for Vanuatu. Section 2.3 investigates debt sustainability under different disaster scenarios.

2.1 Disasters in Vanuatu

42. **Pacific Island Countries (PICs) are extremely vulnerable to various natural disasters, which can be highly destructive.** Between 1980 and 2020, more than 200 natural disasters were recorded in the 10 selected countries in the Pacific (see Figure 2-1). Natural disasters are more likely to strike countries in the Southern Pacific (for example, Fiji, Solomon Islands, and Vanuatu) than the Northern Pacific countries (for example, Palau, Kiribati, and Marshall Islands). The most severe disasters in PICs have brought economic damages that exceeded a country's GDP and affected the entire population. For instance, in 1985 Cyclone Nigel caused damages of about 131 percent of GDP in Vanuatu, while in 1999 Kiribati suffered from a severe drought which affected the whole nation's population.

Figure 2-1: Natural disasters in the Pacific Islands (1980–2020)

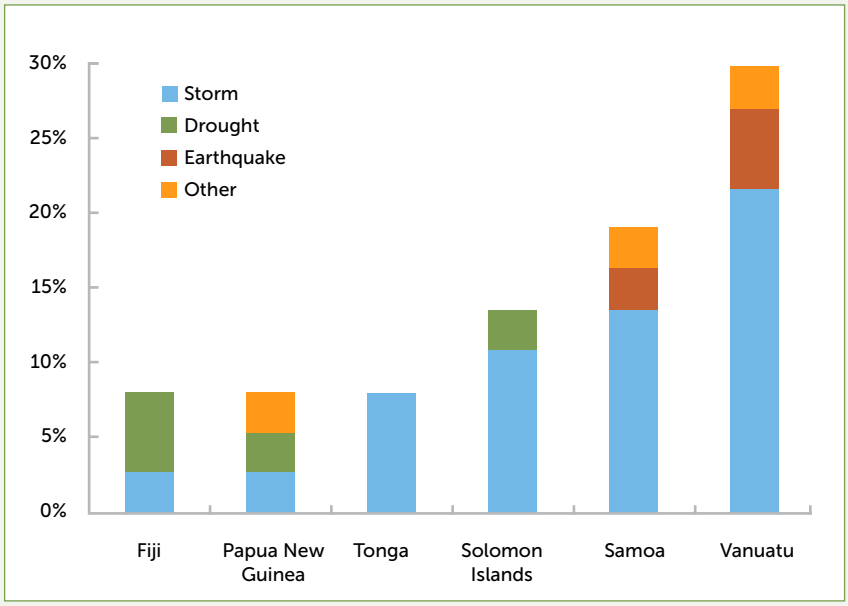


Source: EM-DAT; World Bank staff calculations.

43. **Vanuatu is exposed to both hydrometeorological and geophysical disasters, making it the most at risk country in the world.** Due to its location in the South Pacific tropical cyclone basin and the Pacific Ring of Fire, Vanuatu experiences both hydrometeorological hazards—such as cyclones, floods, and droughts—and geophysical disasters—such as volcanic eruptions, earthquakes, and tsunamis (see Figure 2-1). The probability of a natural disaster happening in Vanuatu in any given year is 65 percent and more than 99 percent in a five-year period (IMF, 2016). Furthermore, Vanuatu has the highest probability among all Pacific countries of getting hit by a severe natural disaster (29.4 percent) (Lee et al., 2018),[8] making it the most at risk of disasters from natural hazards among 180 economies worldwide (World Risk Report, 2019).

44. **Accelerating development and concentration of people in hazardous areas is significantly increasing the country's risk profile.** Port Vila's population is growing at a rapid 4.1 percent annually, from both natural population increase and rural migrants from other islands seeking prosperity and opportunity in the city. The majority of growth (74 percent) occurs outside the municipal boundary, in unplanned, un- serviced settlements in hazardous areas. This trend is mirrored in the country's other population centers such as Luganville. While Port Vila Municipality is estimated to have 66,000 residents, the population of Greater Port Vila—including adjacent peri-urban areas—is almost double at 114,000 (or about 45 percent of the national population in 2018).

Figure 2-2: Probability of a severe natural disaster



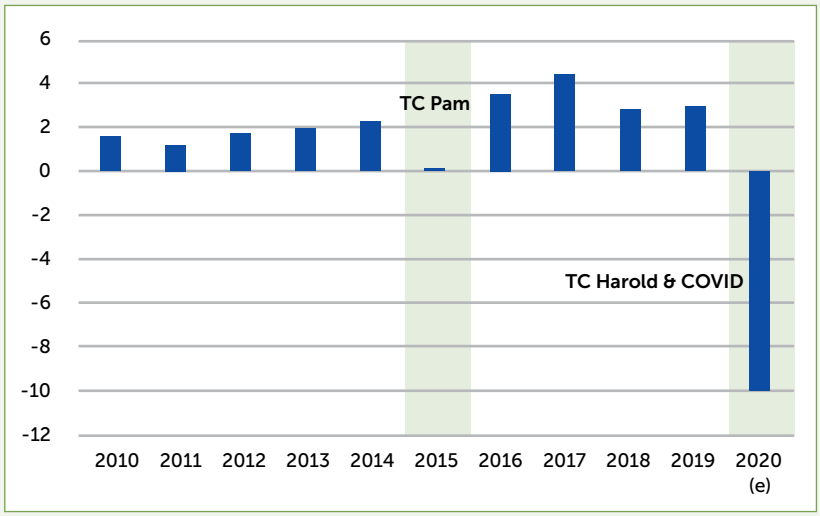
Source: Lee et al (2018).

[8] A severe natural disaster is defined as a disaster with a GDP impact above the 75th percentile in the distribution of damage, for disasters measured over the period 1980-2016.

45. **In the past six years, two Category 5 tropical cyclones caused severe damage and loss of life to the country.** In March 2015, TC Pam struck 22 of Vanuatu's islands, causing estimated economic impacts in the amount of US$450 million, equivalent to 64 percent of GDP. A Post-Disaster Needs Assessment (PDNA) by the GoV indicated that agriculture was the sub-sector most severely affected. Overall, economic growth dropped from 2.3 percent of GDP in 2014 to 0.2 percent of GDP in 2015 (see Figure 2-3). On April 6, 2020, TC Harold made landfall in the Samna Province, with sustained winds over 215 km/h. Over 18,000 people were displaced and around 130,000 people were negatively impacted, almost half of the population. TC Harold caused significant damage to homes, schools, medical facilities, and other infrastructure. Agricultural crops (like kava, copra, and cocoa) and livestock were destroyed, putting livelihoods and food security at risk across the northern islands. Serious health risks emerged in the affected areas—including a malaria outbreak. The government's PDNA estimated that TC Harold caused an economic loss of US$505 million, equivalent to 50 percent of GDP. Combined with the impacts of COVID-19, Vanuatu's output is estimated to have fallen by 10.0 percent in 2020 (see Figure 2-3).

46. **Disasters have a multidimensional impact, from damaged production capacity to reduced human capital.** Disaster shocks threaten production capacity, destroy assets, and weaken supply chains. For instance, TC Harold caused significant damage to the Samna Province, which normally captures the second largest share of visitor spending in the country. The Government of Vanuatu's Post-Disaster Needs Assessment estimates the direct impact of TC Harold on infrastructure and assets of tourism-related businesses to be 0.1 percent of GDP. TC Pam crossed the northern provinces of Vanuatu and decimated the agricultural sector, causing massive losses of food and plantation crops, destruction of coastal habitats, and damage to much of country's fisheries infrastructure. As a result, agricultural output fell by 15.8 percent in 2015, with knock-on effects to other industries. Next, natural shocks compound price volatility and reduce employment opportunities. For example, the COVID-19 pandemic has severely worsened the earnings of seasonal workers and reduced employment in the country, especially in semi-skilled jobs. Finally, disasters also have human capital consequences. Disasters force children out of school and negatively affect their learning experience, potentially with long-term consequences. For instance, the 2018 eruption of Manoro Voi volcano on the Ambae Island resulted in the closure of 77 schools, displacing all school children. The heavy ash from the volcano increased the risk or respiratory illnesses and contaminated food and water, affecting health conditions.

Figure 2-3: Real GDP growth



Source: World Bank.

47. **The effects of climate change will exacerbate the impacts of hydrometeorological events.** It is estimated that by 2040, daily temperatures will increase from 1995 levels by 1.2°C. Warmer sea surface temperatures are likely to intensify tropical storm wind speeds, potentially delivering more damage if they make landfall.[9] While it is uncertain whether climate change will lead to an increased frequency of cyclones, some models do point to amplified tropical cyclone activity over the 21st century (Emanuel, 2013). Warmer sea temperatures are also causing storms with more rainfall, resulting in more flooding and landslides. Relatedly, extreme precipitation events have produced more rain and have become more common. These trends are expected to continue, resulting in increased damage from flooding. Finally, sea level rise will continue and accelerate. Even under a low emissions scenario, the rise in sea level in Vanuatu is projected to be in the range of 8–18 cm by 2030. The sea level rise will amplify coastal storm surges, coastal inundation, and loss of coastal land.

48. **The COVID-19 pandemic, a health-related disaster,[10] presents Vanuatu with an economic crisis of unprecedented scale.** With only a few confirmed cases of COVID-19, the Government of Vanuatu has been successful in limiting the spread of the virus. The economic impact, however, has been substantial (see Figure 2-3). Vanuatu's tourism industry, a mainstay of the Vanuatu economy, continues to be at a virtual standstill. Trade flows have been reduced, while labor mobility programs—an important source of employment and income—have been curtailed.

[9] Model simulations suggest that an increase in Category 4 and 5 tropical cyclones is likely, with wind speeds increasing by up to 10 percent (Knutson et al., 2019).

[10] On March 26, 2020, the President of Vanuatu declared a State of Emergency over the whole of Vanuatu to cope with the COVID-19 pandemic. To do so, the President invoked the Disaster Risk Management Act of 2019. As such, the COVID-19 pandemic satisfies the EM-DAT criteria for natural disasters.

The COVID-19 pandemic has affected the agricultural sector through price and volume effects. Finally, several infrastructure projects planned for 2020 were delayed due to travel restrictions and border disruptions.

49. **Zoonotic disease outbreaks—like COVID-19—are expected to occur more frequently.** In an average year, zoonotic diseases (diseases shared between humans and animals) account for more than one billion cases and a million deaths. The occurrence and impact of known and novel zoonotic disease outbreaks are likely to increase. Continued wide-scale changes in land use, transformation of agricultural practices without adequate biosecurity, climate and weather, trade and travel, urbanization, and other factors will increase the risk of spill-over and spread of diseases (World Bank, 2018).

2.2 The macro-fiscal impacts of disasters

50. **Disasters have both immediate and long-term adverse effects on the economy, especially for developing countries.** As illustrated above, (natural) disasters cause the destruction of physical and/or human capital and lead to a loss of output, reducing economic growth in the short term (Loayza et al., 2012). But disasters—especially severe ones—may also reduce long-term growth as the destruction caused disrupts countries' long-term investments and diverts resources away from development to reconstruction. Furthermore, reconstruction investments often take long to implement. Recurrent disasters may also put permanent stress on human capital, trapping households in poverty, reducing schooling and childhood development. For instance, disasters can lead to stunting and reduced school achievements, thereby reducing future income earning capacity (Alderman et al., 2006). Given limited disaster preparedness and resilience, these effects will play out more strongly in developing countries (Fomby et al., 2013).

51. **Among all Pacific countries, Vanuatu's economy is estimated to be most affected by the impact of natural disasters.** Based on the historical frequency and intensity of natural disasters, a regression model has been used to estimate the economic impact of severe natural disasters for each country in the Pacific (Lee et al., 2018).[11] Depending on which model is used, Vanuatu's yearly growth is expected to be between 0.5 and 0.64 percentage points lower due to the impact of natural disasters. Vanuatu's impacts are roughly twice as large as Samoa's (0.22–0.36 percentage points) and Solomon Islands' (0.22–0.38 percentage points), where also large effects are expected.

[11] The yearly growth impact is estimated by multiplying the expected impact per disaster with the historical probability for each country to be hit by a severe natural disaster in any given year (the latter is reported in Figure 2-2). The expected impact per disaster on economic growth is estimated in a fixed-effects or GMM panel model. A regression approach allows to control for other factors affecting economic growth (Lee et al., 2018).

52. **Natural disasters also impact the fiscal accounts and may threaten debt sustainability.** The output losses created by natural disasters reduce fiscal revenue, as taxable economic activity is wiped out. Governments may also need to provide tax deductions or tax rate cuts to assist recovery. Furthermore, post-disaster recovery involves multiple costs, including emergency and relief services, reconstruction of public infrastructure and buildings, reconstruction (uninsured) housing, expenditures on social, employment, economic recovery programs, and payments for the liabilities and investment needs of state- owned enterprises. The logistical complexities of recovery efforts in the Pacific, such as delivering resources to highly dispersed communities, can amplify the costs of responding to disasters. Finally, post-disaster recovery can impose multiple levels of liability on the public sector, which can threaten fiscal sustainability. The decrease in revenues and increase in expenditures can lead to the deterioration of a government's fiscal position—increasing public debt, the cost of borrowing, and decreasing the government's credit rating.[12]

53. **Vanuatu's fiscal position is estimated to be most affected by the impact of natural disasters, when compared to other Pacific countries.** The same methodology has been applied to estimate the impact of natural disaster on fiscal balances. The results showed that a severe natural disaster could lead to a reduction of fiscal balance-to-GDP ratio by 1.1 to 1.5 percent, depending on model specifications (Lee et al., 2018). Factoring in the historical probability of getting hit by a severe natural disaster, the yearly adjustment of the fiscal balance for Vanuatu is estimated to be between 0.32 and 0.44 percentage points. This is again the highest among all Pacific countries, as Samoa's adjustment is estimated between 0.21 and 0.28 percentage points and Solomon Islands' adjustment would fall between 0.15 and 0.22 percentage points.

2.3 Fiscal sustainability under different disaster scenarios

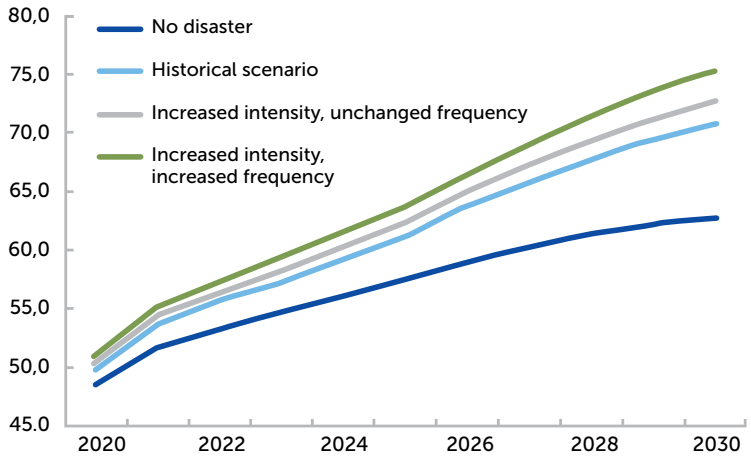
54. **The economic and fiscal impact of natural disasters has implications for debt sustainability.** Natural disasters may lower yearly growth in Vanuatu by 0.64 percentage points and increase the fiscal deficit by 0.44 percentage points on average (Lee et al., 2018). This can have substantial implications for debt sustainability, as the debt-to-GDP ratios could rise, resulting from both increased financing needs and reduced output. The dark blue line in Figure 2-4 shows the trajectory of total public debt-to-GDP in a scenario where Vanuatu would not be affected by natural disasters.[13] The no-disaster scenario can be interpreted as an ideal scenario where the country is fully disaster-resilient. In that scenario, total public debt would reach

[12] According to the latest World Bank/IMF DSA, conducted in 2019, the country was assessed at a moderate risk of debt distress. Under the tailored natural disaster shock—a one-off shock to the debt-to-GDP ratio of 10 percentage points in 2020—the debt threshold would be breached by 2024, confirming the importance of building fiscal buffers to enhance resilience against natural disasters.

[13] Debt-to-GDP projections are calculated based on the IMF–World Bank Debt Sustainability Analysis Framework. See Annex 2 for more detail, including the underlying macroeconomic assumptions.

62.7 percent of GDP by 2030. The light blue line in Figure 2-4, however, shows the path of debt to GDP, incorporating the adjustments (Lee et al., 2018) for economic growth and fiscal deficit. In that scenario, total public debt would reach 70.8 percent of GDP, substantially above the government's debt threshold of 60 percent. The 8 percentage point increase in public debt reflects the impact of natural disasters on the country's fiscal sustainability.

Figure 2-4: Debt sustainability under different disaster scenarios



Source: Authors' own calculations.

55. **The effects of climate change may put further stress on fiscal sustainability, leading to early breaches in Vanuatu's debt threshold.** The discussed adjustments (Lee et al., 2018) are based on historical data, for both the intensity and the frequency of natural disasters. With climate change, however, the intensity of natural disasters is likely to increase (see above), leading to aggravated economic and fiscal impacts.[14] While it is uncertain, also the frequency of natural disasters may increase, leading to increased probabilities of getting struck by a severe natural disaster. The purple line in Figure 2-4 shows the path of debt-to-GDP in a scenario with increased intensity and increased frequency of natural disasters. In this worst case scenario, public debt would reach 75.3 percent of GDP, almost 13 percentage points higher than the counterfactual of no disasters. Figure 2-4 also shows that debt to GDP would breach the government's debt sustainability threshold of 60 percent of GDP already in 2024. Even in a more moderate scenario of increased intensity and unchanged frequency, public debt would rise above 70 percent of GDP (the grey line in Figure 2-4).

[14] While not incorporated in the modeling exercise, increased regional or global outbreaks of zoonotic diseases/disasters could put further strain on the country's macro-fiscal position.

3. Economic trends and prospects

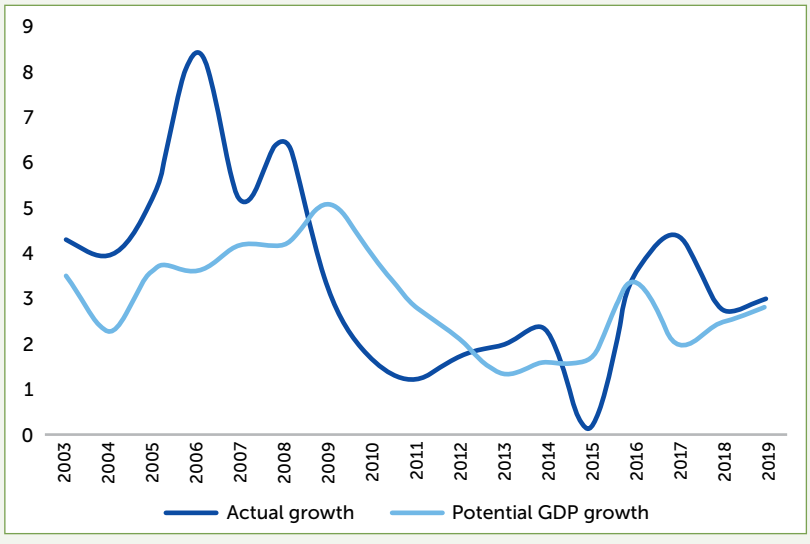
56. **This section provides an overview of recent economic trends and prospects, with a focus on the period 2015–20.** Section 3.1 analyzes the demand-side drivers of economic growth and compares Vanuatu's growth experience with comparator countries. Section 3.2 examines structural changes in the sectoral composition of the economy and productivity trends. Section 3.3 concludes with growth prospects and challenges.

3.1 Demand-side drivers of economic growth

57. **Vanuatu's recent economic performance can be broadly decomposed into three distinct phases, each marked by a significant exogenous economic shock.** During the period 2003–08, the years leading up to the Global Financial Crisis (GFC), Vanuatu experienced a sustained period of strong, investment-led economic expansion. In the six years following the crisis (2009–14), the rate of growth slowed to 2.0 percent per annum as the investment boom waned. The considerable damage wrought by Cyclone Pam in 2015 led to a sharp decline in the rate of growth in that year. In the four years since the cyclone (2016–19), reconstruction efforts have lifted the rate of growth to an annual average of 3.4 percent.

58. **Economic growth in the years leading up to the GFC was marked by an investment boom.** In the six years leading up to the Global Financial Crisis (2003–08), real output grew, on average, by 5.6 percent per annum. Several major donor-funded infrastructure projects—such as the Efate ring road—as well as a boom in residential construction drove strong growth in construction activity. While output at that time exceeded estimates of potential output, the productivity-enhancing nature of the

Figure 3-1: Actual growth vs. potential GDP growth



Source: Authors' own calculations.

growth led to potential output growing over that period as well (see Figure 3-1). Through this period, real GDP per capita rose from around US$2,500 in 2003 to US$3,000 in 2008.

59. **In the post-GFC period (2009–14), Vanuatu experienced slow growth as investment waned**. The direct effects of the GFC on Vanuatu were relatively muted due to the limited financial linkages with larger financial centers. Continued growth in tourism arrivals from major markets such as Australia and New Zealand, which were relatively spared the worst effects of the shock, contributed to the 3.3 percent growth in 2009. However, in the five years following the GFC (2010–14), as the investment boom waned, the rate of growth slowed to a 1.8 percent per annum. Given that the rate of population growth was 2.8 percent over the same period, Vanuatu experienced an overall decline in living standards.

60. **In the period 2015–19, growth was shaped by post-cyclone recovery.** The considerable damage wrought by Cyclone Pam in 2015 led to a sharp decline in the rate of growth in that year—real growth in 2015 was flat—and a further dip in per capita output, which troughed at US$2,781. In the four years since the cyclone, reconstruction efforts have lifted the rate of growth to an annual average of 3.4 percent. The recovery was driven by both investment and consumption growth. Development partners provided considerable support in the wake of the Cyclone Pam, both in the form of disaster relief and funding for infrastructure. With investments in durable equipment and construction activity, gross fixed capital formation contributed 0.34 percent on average to growth (see Table 3-1). Looking across the four years since TC Pam, however, consumption—both private and public, which collectively which accounts for around 80 percent of output—was the predominant driver of growth. It accounted for nearly three- quarters of the total growth in the recovery period. In part, this reflected a bounce-back in tourist arrivals.

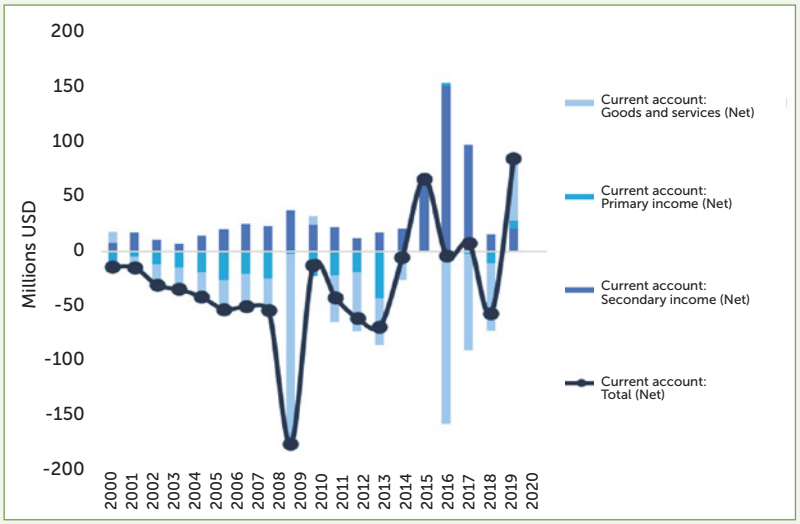
Table 3-1: Contribution to total GDP growth

	(Percentage points)*		
Expenditure type	**2000–2007**	**2008–2015**	**2015–2019**
Consumption	1.67	2.45	3.12
Households/NPISHs consumption	1.34	1.68	1.90
Government consumption	0.32	0.77	1.22
Investment	3.97	0.77	0.34
Gross fixed capital formation	4.12	0.78	0.34
Change in inventories	-0.15	-0.01	0.00
Next export	-0.04	-0.95	-0.18
Exports	2.12	1.49	2.46
Imports	2.16	2.43	2.64
Total	5.59	2.27	3.28
Unallocated	-3.04	-0.51	0.14
Annual GDP growth	2.55	1.76	3.42

Source: World Bank.
Note: Decomposition is an approximatyion and individual growth rates may not add up to the total growth rate.
*Expenditure growth rates weighted by their average share in total expenditure (evaluated in the mid-point between beginning and end of the period).

61. **A surplus in services trade is generally more than offset by a deficit in goods trade, resulting in net exports subtracting from growth.** The services balance is generally positive, averaging 18.5 percent of GDP during the period 2015–19. Tourism receipts reached 23.5 percent of GDP on average, accounting for 63 percent of services exports. The goods balance is generally negative, averaging 38 percent of GDP during the period 2015–19. Vanuatu's goods exports are concentrated in a few low-value-added cash crops, while almost all capital goods, fuel, and non-durable consumer goods are imported.[15] Vanuatu is also a net importer of food. Between 2015 and 2017, the deficit on trade in goods and services widened substantially, mainly reflecting a sharp rise in demand for imported goods associated with reconstruction efforts. This was broadly financed by large inflows of development assistance (see Figure 3-2). In 2018, a strong rise in services exports, coupled with rises in remittances from seasonal workers, drove the current account into surplus and supported growth. The rise in services export revenue was underpinned by ongoing recovery in tourist arrivals plus windfall revenues from the economic citizenship program (ECP).

Figure 3-2: Vanuatu's external sector: Current account



Source: IMF and International Investment Position Statistics.

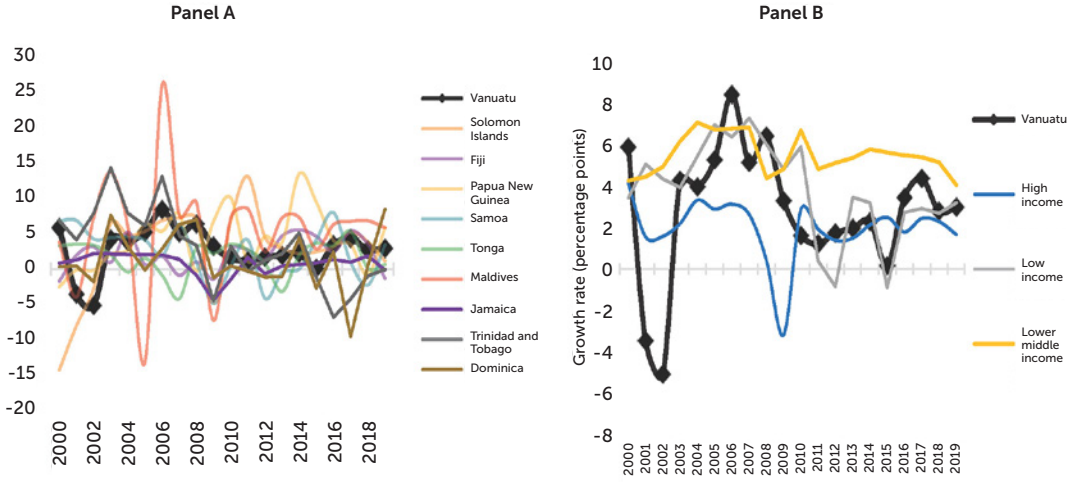
62. **Post-cyclone fiscal measures and external assistance supported growth.** The substantial inflows of external support in 2015 to finance cyclone recovery and reconstruction projects spurred economic growth. Total government expenditure rose appreciably as a share of GDP in 2015 and remained elevated for the next years, underpinned by ongoing external support and windfall revenues from the ECP. The ECP revenues have helped in generating fiscal surpluses, which were used to strengthen the cash reserves and retire external debt.

[15] Vanuatu's export concentration index among its primary domestic exports—calculated using a normalized Herfindahl-Hirschmann index of the product concentration of merchandise exports—has increased from 0.52 in 2009 to 0.80 in 2019. This is considerably higher than both the world average and average of developing countries.

63. **Despite growth exceeding potential output during the post-cyclone period, inflation pressures remained largely contained.** The rate of CPI inflation tracked moderately upward in the four years following Cyclone Pam, reaching 2.8 percent in 2019—though it remained well within the Reserve Bank of Vanuatu's target range (0–4 percent). This potentially reflects the effect of muted inflation pressures within major trading partners (such as Australia and New Zealand), plus the remaining slack still left in the economy following TC Pam. To mitigate the risks of inflation the RBV also returned to a more neutral stance by modestly increasing banks' statutory reserve deposit requirements and mopping up additional excess liquidity through open market operations. Inflation had been low and stable prior to the cyclone, averaging 1.1 percent through 2011–16, as softening global fuel prices feed into lower prices of imported goods and slower domestic price growth.

64. **Vanuatu's growth since Cyclone Pam has been strong compared with similar countries.** A hallmark of small island developing states (SIDS) is their volatile rates of growth, reflecting their high exposure to exogenous shocks and narrow production bases. Direct year-to-year comparisons are therefore difficult. Cumulatively, however, Vanuatu's growth between 2016 and 2019 has been faster than all comparator PICs and faster than all comparator countries (the Maldives being the only country with a faster rate of growth over this period) (see Figure 3-3, Panel A). During the period 2000–10, Vanuatu's growth has generally been well correlated with the lower-middle income countries. Since then, however, Vanuatu has underperformed compared to their income peers (see Figure 3-3, Panel B).

Figure 3-3: Growth comparison



Source: World Bank.

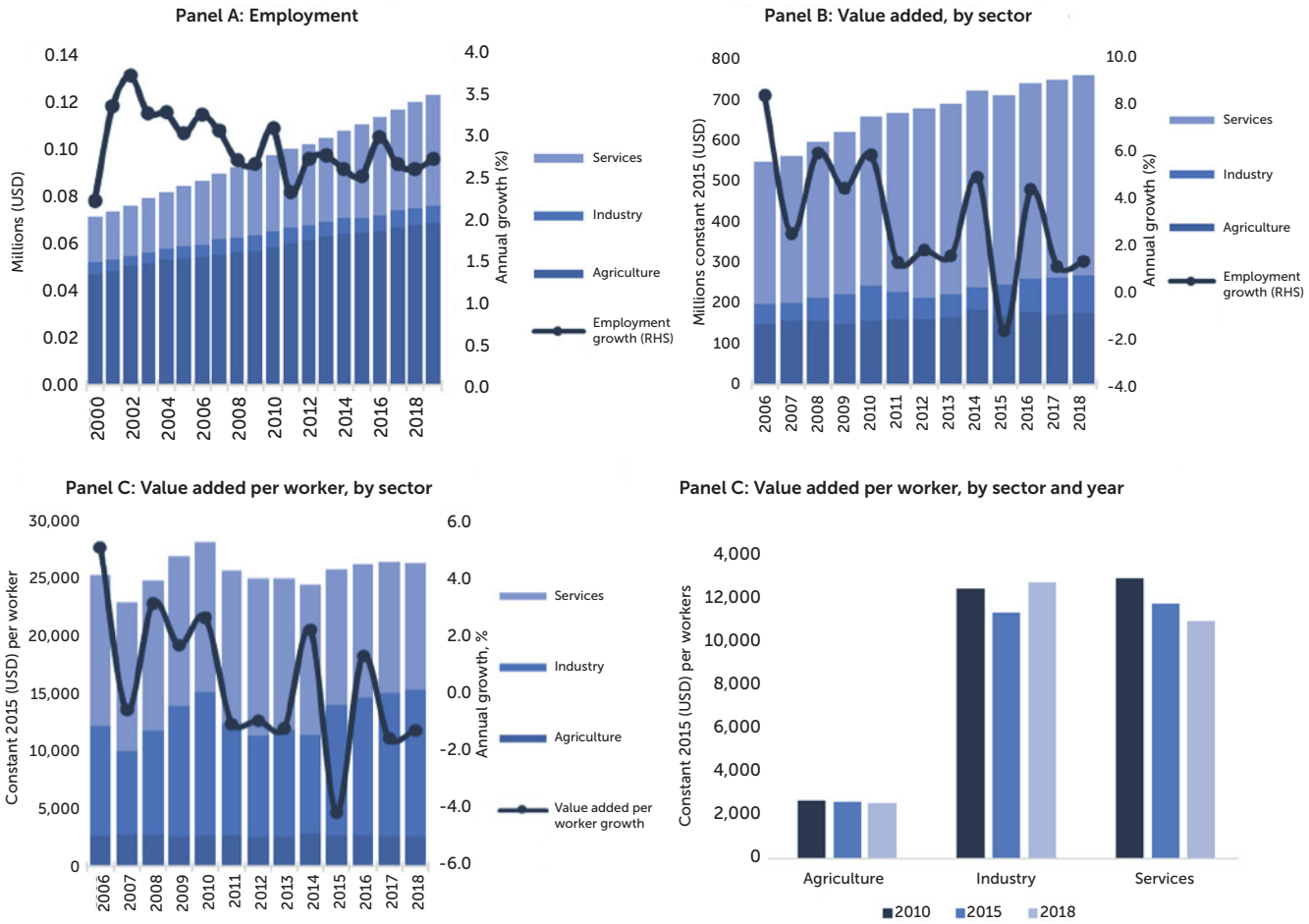
65. **In 2020, Vanuatu's post-cyclone recovery came to an abrupt end as the twin shocks of TC Harold and COVID-19 severely disrupted economic activity.** In April 2020, Tropical Cyclone Harold—a smaller but slower-moving storm than TC Pam—slammed into the country's northern provinces. TC Harold caused significant damage to homes, schools, medical facilities, and other infrastructure. Agricultural crops (like kava, copra, and cocoa) and livestock were destroyed, putting livelihoods and food security at risk across the northern islands. Additionally, the COVID-19 pandemic has exacted a heavy toll on Vanuatu, even though the country has been largely spared by the virus. The combination of international border closures effectively shuttering the tourism industry, plus falling agricultural commodity prices and social distancing precautions caused a severe economic downturn, estimated at 10 percent of GDP.

3.2 Structural change and productivity trends

66. **While dominated by the impacts of shocks, Vanuatu's recent growth performance has also occurred against a backdrop of modest structural change**. The agriculture sector is Vanuatu's largest employer. In 2018, it accounted for 56 percent of total employment, compared with services (36 percent) and industry (3 percent) (see Figure 3-4, Panel A). According to the latest data from the Vanuatu National Statistics Office (VNSO), the service sector—which includes tourism-related businesses—makes the largest contribution to output, accounting for just under 65 percent of total value added in 2018, followed by agriculture (31 percent) and industry (12 percent) (see Figure 3-4, Panel B). Accordingly, labor productivity (measured as

value added per worker) is considerably higher in the industry (US$12,776) and services sector (US$11,008) than in agriculture (US$2,599) (see Figure 3-4, Panel C).[16]

Figure 3-4: Employment and value added



Source: World Bank.

67. **Employment growth has been broadly stable for the past decade, slightly above 2.5 percent on average, though the composition of employment has changed.** Over the ten years to 2019, services employment has grown by 4.3 percent each year on average. This has been in excess of the 1.9 percent average increase in agriculture employment over the same timeframe, as well as the 1.1 percent average growth in industry employment. Accordingly, services employment has grown as a share of the labor force, from around 32 percent in 2009 to 38 percent in 2019.

[16] The data in Figure 3-4 plus the analysis on labor productivity combines GDP data from the World Development Indicators with sectoral gross value- added data from the VNSO. Sectoral compositions are spliced into the GDP data (using % contributions). At the time of writing, 2018 was the latest outturn published by the VNSO. Total GDP data were available from the World Development Indicators to 2019.

68. **Total labor productivity has fallen, however, partly due to the impacts of TC Pam.** The changing compsition of employment toward services would suggest both structural change and rising productivity. However, total labor productivity has fallen, reflecting a decline in service sector labor productivity (down by 20 percent between its peak in 2012 and 2018) as well as agricultural productivity (down by 9 percent between its peak in 2014 and 2018). Particularly sharp falls in productivity were recorded in 2015 as the effects of Cyclone Pam undermined economic activity (Figure 3-4, Panel C). Important to note that declines in productivity in the services sector have been evident in every year since 2012, suggesting a broader downward trend (Figure 3-4, Panel D).

69. **In contrast, productivity in the industry sector has risen strongly in recent years, underpinned by the cyclone recovery effort.** With a generally steady upward trend in industry employment, labor productivity in the industry sector has broadly mirrored developments in the (donor-funded) project cycle. Output per worker has increased by 50 percent between 2014 and 2018 (except in 2015, when TC Pam struck; value added per worker in the industry sector dropped that year). A similarly strong increase was observed in the years prior to the GFC.

70. **The result of weak and declining total labor productivity is that Vanuatu's total economic output has not kept pace with growth in its factors of production.** The consequence is that total factor productivity (TFP) has subtracted 0.6 percentage points from growth between 2015 and 2019 (see Table 3-2). This is a continuation of a pattern since at least the beginning of the century in which TFP has generally been negative and thus acting as a drag on growth. The occasions when TFP has been positive (2007 and 2017) have tended to coincide with periods when large donor-funded investment projects were underway, while sharp decreases in TFP have been associated with disaster events.

Table 3-2: Growth accounting

Growth accounting	Compound annual growth rates (Percentage points)		
	2000–2007	2008–2015	2015–2019
Capital stock	3.92	3.14	2.06
Labor	2.18	1.76	1.91
Total factor productivity	-3.57	-3.15	-0.63
Real GDP	2.52	1.75	3.36

Source: World Bank.

3.3 Growth prospects and challenges

71. **Looking forward, Vanuatu's medium-term growth trajectory will depend on the evolution of the ongoing pandemic and the effectiveness of global policy response.** In the period 2021–25, Vanuatu's economy is projected to grow by 3.6 percent on average. The country's high degree of openness and its reliance on tourism means that the pace of recovery will largely depend on how quickly tourism markets can be restored. This in turn, will likely depend on the vaccination rollout within Vanuatu and abroad. Unexpected delays caused by adverse events and the emergence of variants of concern undermining vaccine efficacy therefore present downside risks to the forecasts. Ultimately, recovery in the tourism sector is likely to determine whether Vanuatu recovers in lockstep with other countries in the region or diverges from its regional peers. Construction of major projects and recovering agricultural activity and exports should, however, help support growth.

72. **The critical growth challenge for Vanuatu is to improve resilience to shocks and to raise productivity.** Vanuatu's considerable exposure to shocks casts a long shadow over the domestic economy. Natural disasters—such as Cyclones Pam and Harold—interrupt production across the key sectors of agriculture and services and lead to unemployment and the destruction of the capital stock. Furthermore, the COVID-19 shock has also crippled the country's key driver of growth, the tourism industry. Improving resilience and adaptative capacity to shocks would smoothen the sharp fluctuations in activity when shocks occur. More generally, the sustained weakness in productivity points to the considerable structural constraints that Vanuatu faces. This is particularly the case for agriculture which remains constrained by the widespread use of low-tech production, smallness of the industry and remoteness of the island. Compounding these challenges are the systematic issues in education as well as the prevalence of a low skilled workforce, which also have implications for other sectors. Policies that improve human capital accumulation and help sectors shift to higher value-added forms of production are therefore likely to be growth-enhancing. Seasonal worker programs, which involve considerable technology transfer, also offer scope for improving labor productivity.

73. **Post-disaster recovery offers an opportunity to lift Vanuatu's growth potential.** Similar to the period immediately prior to the GFC, the solid pace of growth immediately prior to 2020 was supported by investments in major infrastructure projects. The GoV, with the support of development partners' post-cyclone reconstruction efforts, has invested in critical connective infrastructure, including public wharves, construction of new roads, and sealing of key roads to ensure greater road access and usability all year round. Investments have also been made in improving market connectivity via digital communications technology. While leading to increased output and employment in the immediate term, such infrastructure investment projects are also likely to be productivity-enhancing.

Indeed, in each period, the increase in construction activity coincided with increases in Vanuatu's potential output. Importantly, infrastructure investment also facilitates structural transformation within sectors by strengthening supply chains and improving the flow of labor, capital, goods, information, and finance. In the wake of the twin shocks of Cyclone Harold and COVID- 19, Vanuatu will require substantial additional investment to recover. It will be essential that these investments alleviate the structural constraints that inhibit growth.

4. Agriculture

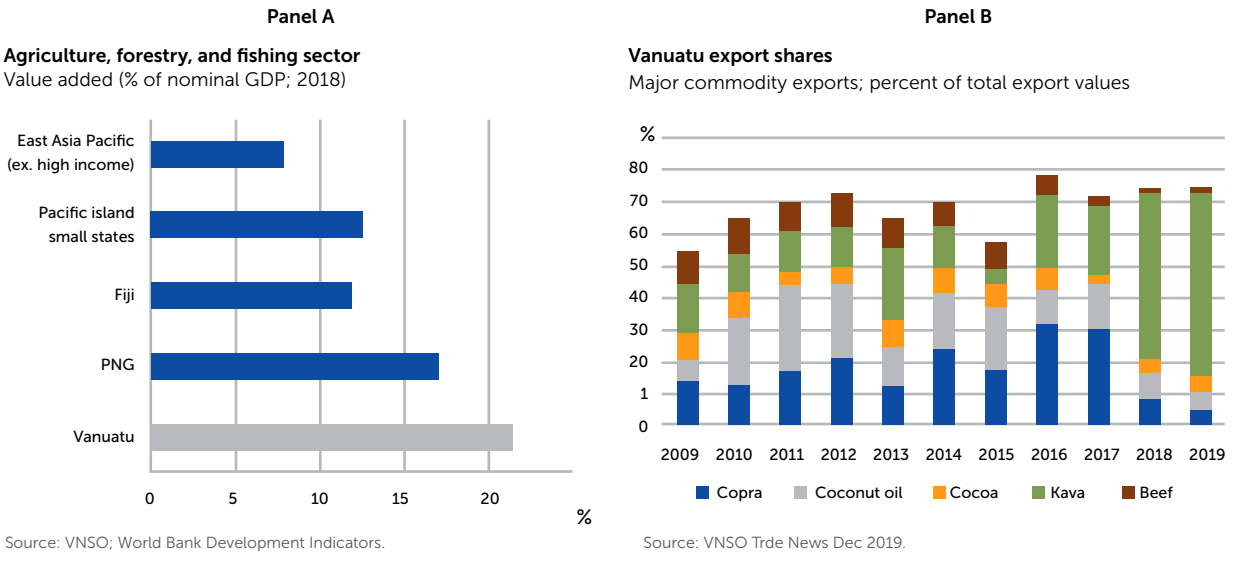
74. **This section discusses Vanuatu's agricultural sector.** Section 4.1 gives an overview of the agricultural sector. Section 4.2 highlights a number of important constraints facing the agricultural sector, including regulatory and governance challenges, imperfections in factor markets, and the implications of remoteness. Section 4.3 goes on to analyze how disaster shocks affect the agricultural sector, looking at constraints and opportunities for growth. Import substitution, export opportunities, and the link between agriculture, tourism, and biofuels are discussed in Section 4.4. The section concludes with policy implications in Section 4.5.

4.1 Agriculture in Vanuatu

75. **Agriculture directly influences the lives and livelihoods of the vast majority of ni-Vanuatu citizens**. Collectively, agriculture—including crop production, animal production, forestry, and fishing—is a critical source of healthy food and income for the three-quarters of the population that live in rural areas and a good share of the urban population as well. Importantly, small-scale agriculture operates like an informal safety net for households, underpins resilience to the effects of idiosyncratic shocks, and is closely intertwined with the identity of many ni-Vanuatu.

76. **Agriculture accounts for 21 percent of the domestic economy and plays an outsized role in Vanuatu's export of goods.** The share of agriculture in the economy is significantly larger than PICs or even the EAP region (Figure 4-1, Panel A). Cash

Figure 4-1: Share of agriculture in Vanuatu's economy



Source: VNSO; World Bank Development Indicators.

Source: VNSO Trde News Dec 2019.

crops (like copra, coconut oil, cocoa, and kava) plus beef have consistently accounted for most of Vanuatu's merchandise exports (Figure 4-1, Panel B). In recent times, however, a distinct shift has occurred in Vanuatu's export mix. Since 2015, production and export of kava have risen appreciably, at the expense of copra and coconut oil. The rise of kava is underpinned by strong domestic demand, strengthened kava prices, and expanding international markets.

77. **The majority of the country's labor force is involved in the agricultural system, with an important role for women.** In the rural areas, subsistence agriculture accounts for 75 percent of the economically active. While employment in agriculture is equally split between men and women, women play a particularly important role in the subsistence and semi-commercial activities of households. They are actively involved in planting and harvesting gardens, are active in cocoa and coconut farming, and contribute to processing and sale of home-made products, as well as the management of markets, shops, and stalls.

78. **Smallholder producers account for the vast majority of Vanuatu's agricultural output.** The smallholder sector produces 90 percent of agricultural output, of which 75 percent in subsistence production and 15 percent is semi-commercial use (Mackenzie-Reur and Galgal, 2018). A range of nutritious staple fruit and vegetables are farmed, including kumala, yam, taro, manioc, island cabbage, and bananas. For many households, farming of crops is complemented by small family herds of poultry and pigs. Nearly all households in coastal villages are involved in coastal fishing activities at different levels of intensity, including marine fishing, reef gleaning, and collection of shellfish and other invertebrates (GoV, 2015).

79. **Local markets offer an opportunity to sell surplus produce and provide a ready source of food for the non-farm sector.** Fresh and cooked food is sold at roadside stalls and at village marketplaces, kava bars, and schools throughout the country. Such sales are overwhelmingly informal activities and so are not subject to VAT. In addition, semi-commercial arrangements have emerged, whereby rural growers regularly send shipments of bulky and less perishable foods to more established marketplaces in Port Vila and Luganville. Households also add value to raw local forestry and marine resources by turning them into handicrafts for sale, mainly concentrated near urban centers and tourism hotspots.

80. **Small-scale farming has been a mainstay of food security and income generation throughout Vanuatu.** It provides a ready, abundant, and nutritionally varied supply of food that accommodates the needs of rising populations over time (Cox et al., 2007). Especially in rural areas, the sale of fresh and cooked foods, handicrafts, and cash crops (like cocoa, coconut, and kava) has been a crucial source of income. The cash generated allows for a variety of essential goods and services to be purchased, including health and education fees, fuel for transport, electricity, and mobile phones.

81. **The nature of subsistence production underpins resilience by allowing households to spread risk through diversified production and traditional social protection mechanisms.** Farmers can shift their labor between the cultivation and harvesting of food and cash crops, depending on price signals or income needs. Additionally, food gardens underpin the system of community-level pooling of goods and labor, which is a key dimension of the reciprocity central to the informal social protection system in PICs. Social networks share produce and work together on joint projects, such as copra harvesting. This helps to explain why households in Vanuatu overwhelmingly identify gardens as an essential coping pathway during shocks (McDonald, 2018).

82. **Traditional forms of social protection, however, are often inadequate when the community at large is affected, such as in the case of large-scale natural disasters (Pelham et al., 2011).** Households relying solely on informal social protection often need to resort to negative coping strategies such as reducing the spend on health, education, and food, with harmful implications on human capital and weakened overall resilience to future shocks (McDonald, 2018). In the past, natural disasters were considered unexpected and dealt with by issuing emergency relief. Recurrent experience of natural disasters has shifted policy thinking towards the importance of adaptation to shocks and 'bouncing back better' to a more resilient state of lower exposure and vulnerability.[17]

[17] Adaptive social protection systems have the potential to be used as a complementary mechanism to traditional social protection and as a response to natural disasters both ex-ante and ex-post (Bowen et al., 2020). They help to build resilience by investing in capacity to prepare for, cope with, and adapt to shocks. They promote government-led investment in the three resilience capacities of households who are particularly vulnerable to shocks through social protection programs. Together, social safety nets, social insurance, and labor market programs constitute the social protection system.

83. **The importance of subsistence agriculture and coastal fisheries goes well beyond its role as a safety net and source of economic activity.** Much Pacific Island culture revolves around the land—both in terms of agricultural produce, as well as the planting and harvesting practices themselves. Land is central to the cultural and spiritual identity of Pacific Islanders, as well as a source of shelter, other useful assets, and medicine. Furthermore, livestock plays an important role as a prestige item. Pigs, in particular, have traditionally been held as a form of wealth and considered essential to major ceremonial transactions, such as marriage payments and compensation for death (MNCC, 2012).

84. **A small number of export-oriented firms operate in the country, producing about 10 percent of agricultural output.** The commercial sector consists of plantations, farms, and fisheries. The plantation sector is headlined by a few large operators as well as large community grower groups. Commercial fruit and vegetable farms supply niche vegetables, herbs, and spices to domestic markets, including restaurants, hotels, and supermarkets. Large cattle farms produce most of Vanuatu's beef for domestic and international markets. The commercial fishing sector consists of offshore and coastal fisheries. Large foreign and domestic vessels undertake fishing on an industrial scale, catching mainly pelagic tuna species in deep water. Commercial coastal fisheries include sportfishing and small aquaculture producers.

85. **In addition, there is a system of downstream agribusinesses that makes up the agricultural supply chain.** Farmers sell raw and moderately transformed produce to traders, which in turn sell to larger buyers in population centers for further processing or export. In the case of copra, for instance, crushing mills process raw copra mainly into crude coconut oil (CNO) for export but also manufacture CNO products and refined biofuel for local markets. Some larger commercial plantations vertically integrate downstream processing. The post-production process for beef involves the transport of cattle by truck and sea to two large export certified abattoirs that produce high-value beef for export and local markets. The abattoirs are vertically integrated, with the abattoir owners also owning a significant portion of the cattle farms (Cole, Waldren, and Quigley, 2019). A significant new development in the fishing sector is the Sino-Van fish processing plant in Port Vila, which came online in 2019. This represented an important, albeit difficult, leap up the commercial value chain.

4.2 Agriculture and disasters

86. **Recent events have starkly underlined the vulnerability of agriculture to natural disasters.** In 2015, Tropical Cyclone Pam—the most powerful storm recorded in the Pacific—crossed the northern provinces and decimated the agricultural sector, causing massive losses of food and plantation crops, destruction of coastal habitats, and damage to much of the country's fisheries infrastructure. As a result, agricultural output fell by 15.8 percent in 2015, with losses concentrated in crop production and livestock (Box 4.1). In April 2020, Tropical Cyclone Harold slammed into the northern provinces. Agricultural crops (like kava, copra, and cocoa) and livestock were destroyed, putting livelihoods and food security at risk across the northern islands. The loss to agricultural production was estimated at US$167 million. Similarly, volcanic eruptions in 2018 on the islands of Ambae and Ambrym severely adversely affected agricultural production. In Tanna, ash fall and acid rain from the Yasur volcano had major impacts on the livelihoods of the people on the island. A nationwide state of emergency was also declared in 2019 to try and contain an infestation of the coconut rhinoceros beetle, which poses a considerable threat to the country's coconut industry.

87. **Climate change will exacerbate the impacts of natural disasters, with detrimental consequences to agricultural production and national food security.** Climate projections for Vanuatu suggest that temperatures will continue to increase. More extremely hot days are expected, while rainfall patterns will become more volatile and intense. Warmer sea surface temperatures are likely to intensify tropical storm wind speeds, potentially delivering more damage if they make landfall. Furthermore, long periods of drought are expected to occur more often, resulting in water scarcity. Sea level rise will continue and accelerate, amplifying coastal storm surges, coastal inundation, and loss of coastal land. Analysis suggests that these changes are likely to be detrimental to agricultural production and overall national food security. Both commercial and subsistence agriculture in Vanuatu is based largely on rain-fed agricultural production systems. As such, variability of rainfall, higher likelihood of high-intensity precipitation, and increased evaporation with more pronounced dry seasons could severely impact agricultural production. For instance, intense rainfall during planting seasons could damage seedlings, reduce growth, and provide conditions that promote plant pests and diseases. More pronounced dry seasons, warmer temperatures, and greater evaporation could cause plant stress reducing productivity and harvests. Some agricultural crops are already showing signs of stress under current climatic conditions. Water scarce areas and small islands that depend entirely on rainwater and under groundwater sources are also experiencing severe water shortages. Coastal erosion and inundation are reported from coastal communities, and fish poisoning has been an emerging problem in recent years.

Box 4.1: Impacts of Cyclone Pam on the agricultural sector

A Post-Disaster Needs Assessment by the GoV estimated that Severe Tropical Cyclone Pam caused VT 6.1 billion in damage; around 10 percent of GDP (VT 4.6 billion in lost output and a further VT 1.4 billion in destroyed and damaged assets). The review indicated that agriculture was the sub-sector most severely affected (69 percent of all losses and damages), followed by forestry (16 percent), livestock (9 percent), and fisheries (6 percent). Notable features of the damage in the affected areas included:

- A majority of fruit trees either destroyed or completely stripped of all fruit, including coconut.
- All leafy vegetables and banana trees were destroyed.
- Root crops (yam, manioc, sweet potato, and taro), despite having underground protection, were mostly lost or badly damaged—having been uprooted or flooded during the cyclone.
- Many vegetative planting materials and gardening tools destroyed or damaged.
- Wild birds and flying fox populations (common bush meat sources in rural communities) declined by up to 90 percent.
- Livestock were gravely impacted with a high proportion of pigs, cows, and chickens lost.
- Livestock feed, particularly forage for pigs, was destroyed.
- Canoes, fishing boats, engines, and fishing gear were damaged or destroyed.
- Coastal marine habitats (coral reefs, mangroves, and seagrass beds) were severely damaged.

Source: GoV (2015).

88. **Climate change has also produced other negative consequences.** There have been increased pest activities due to changes in temperature and rainfall. On the one hand, this poses a challenge because ni- Vanuatu farmers typically have limited access to agrichemicals such as fertilizers and pesticides. On the other, the use of synthetic pesticides is rising, and is causing several negative side effects such as contamination of soil, water, vegetation, and toxicity to a host of other organisms including birds, fish, beneficial insects, and non-target plants. Of course, the increasing cost of synthetic agrichemicals is another challenge that farmers are grappling with (FAO, 2019). There is also the issue of increases in salt spray and rising sea levels. Salt spray occurs as waves crash into the rocky coastline, with gusts of wind spraying sea salt straight into nearby communities, sometimes killing crops and damaging property. Farmers are moving their farming lands away from the sea into the hills as an adaptation strategy to salt sprays and other events such as flooding associated with rising sea levels.

89. **Climate change effects are likely to have far greater adverse impacts on smallholder farmers compared to larger commercial operations.** Smallholders often rely on natural freshwater sources such as streams for their water supply. A phenomenon that is occurring more in recent years is that during the dry season, streams dry up. This adversely affects crop and livestock yields, leading to reductions in total production, and ultimately affecting livelihoods. Compared to larger commercial operations, smallholders do not have the means to set up adequate water storage facilities to help supplement water shortages during drier seasons. Smallholders are therefore left with no choice than to watch their meager investments dwindle in the face of water scarcity. These farmers resort to finding other means of livelihood by seeking employment in scarce domestic low paying off-farm jobs to supplement farm incomes. Over the years, some farmers have adapted to events such as water shortages during the drier seasons by completely avoiding production and seeking seasonal employment in neighboring foreign countries such as New Zealand.

4.3 Other growth challenges

90. **Vanuatu's agriculture sector faces a host of challenges.** Next to the growing threat of natural disasters and climatic shocks, issues in Vanuatu's agricultural sector range from traditional inputs and production systems, predominantly subsistence orientation, small market size and high transaction costs, under-developed knowledge and innovation infrastructure, limited availability of finance, and the lack of an appropriate policy framework to drive modernization and agribusiness development.

91. **Farm production is beset by a host of structural constraints which render it relatively uncompetitive, exhibiting both high costs and low productivity.** To begin with, farming is predominantly small-scale and subsistence oriented, dependent upon family labor and traditional inputs. Although fertile land appears to be abundant, issues with land use and access can constrain agricultural yields. Growing populations near urban centers are placing increased pressure on land and marine resources. In rural areas, declining yields are also a concern due to the ageing of the plantations. Additionally, competition for land can reshape agricultural production patterns; coconut plantations have gradually spread to more fertile zones, where they compete with food production. Pasture quality is also in decline, and the predilection for agro-silvo-pastoral systems—in which livestock are reared under the shade of coconut trees—is not conducive to fattening (Cole, Waldren, and Quigley, 2019). Further, customary land tenure is not necessarily conducive to the commercialization and growth of farms, nor is it amenable to conservation measures, which require local communities to be consulted and agree to any such changes.

92. **Limited use of technical inputs, labor shortages, and imperfect knowledge transfer have also served to limit productivity.** Most small-scale crop production remains unmechanized, while the lack of irrigation and fertilizers means that fruit and vegetable production is still largely seasonal. Small-scale fisheries also lack the equipment to access the relatively abundant offshore fishery resources. Finally, farmers often lack knowledge on modern farming techniques, a problem further aggravated by under- resourced government extension services and training programs, as well as urban migration. Accordingly, farmers have limited awareness of supply chains, business management, and required standards for accessing different market segments.[18]

93. **Vanuatu's smallness, remoteness, and internal dispersion add to the structural challenges by making it difficult and costly to transport goods around the country.** Most international and domestic trade is undertaken by sea. The two main consolidation ports situated in the urban centers of Port Vila and Luganville handle most international trade. An interconnected system of public wharves and jetties links rural producers with export hubs and urban markets, mainly via circuitous routes (see Figure 4-2). Coastal anchorages and landings are used throughout the islands where there are no jetties or wharves. Agricultural producers, who are scattered across the archipelago, must transport their goods to one of these shipping nodes—usually by road and/or banana boats—before it can be sent to market. Long distances and handling through multiple ports ensures high freight costs. Compounding the costs of shipping, poor quality transport infrastructure—including few all-weather roads plus absent or deteriorating wharves and jetties—increases the difficulty of transporting goods to market.

94. **Smaller and more remote rural locations are the most severely disadvantaged, which prevents the benefits of growth from being broadly shared.** The inherent disadvantages of longer distances and weak supply become entrenched when shipping providers prioritize more profitable higher-volume routes. Distance squeezes production margins on the input side as well, raising the cost of fuel and materials—a particularly important consideration in livestock production.[19] These disadvantages are amplified by the inherent challenges of a lack of scale of farming operations in remote areas, which increases the unit costs of production and reduces the scope for diversification. Distance and small scale also weaken producers' market power, leaving them vulnerable to predatory buying by traders (McGregor, Watas, and Tora, 2009). Remoteness also inhibits the flow of important market-relevant information from domestic and international markets back to farmers, meaning farmers can have limited awareness of emerging trends or larger global market opportunities.

[18] A notable example is the misalignment of informal business practices of producers and the formal business administration requirements of purchasing managers in hotels, which has been identified as an important contributing factor for why the tourism industry continues to rely heavily on imported fruit and vegetables (FAO, 2014).

[19] The lack of sufficient locally produced inputs for agricultural production, such as fuels, planting materials, feed, and other inputs for livestock (such as day-old chicks for local chicken egg and broiler production, fencing materials, and feed for cattle), means agriculture remains dependent on costly imported inputs (FAO, 2014; Vanuatu Beef Value Chain Analysis report).

95. **The agriculture sector is among the least banked and least insured sectors in Vanuatu.** In December 2018, less than 2 percent of all outstanding bank loans were directed to the agriculture sector, with two-thirds of these loans attracting an interest rate at or above 9 percent per annum. There are numerous barriers for the agriculture sector in accessing credit. A combination of low financial literacy, lack of identification, long distances to access points, the dominance of cash in the sector, and the perceived costs inhibit setting up formal bank accounts. These barriers are exacerbated by the fact that banking products are not necessarily well-tailored for rural customers, with complex fee structures for deposits stretching people's financial competencies (McCaffrey, 2011). Difficulties assessing risk due to the lack of credit information on potential borrowers also lead to lengthy delays in loan approvals and prohibitively high interest rates. Farmers also face difficulties in having or meeting collateral requirements for loans, with issues relating to using land as security for loans in the context of customary land ownership and title issues (ADB, 2014). Insurance in Vanuatu is almost non-existent, and particularly so in agriculture (RBV, 2016).

96. **Farmers are often risk-averse and encounter social and cultural factors that inhibit investment.** In subsistence-style agriculture, the time and land allocated to gardening is large, while new crop varieties carry risks. This includes the risks of low rates of initial success as well as long payoff times from investments (FAO, 2014). Inherent socio-cultural features of the rural livelihoods also prevent ni-Vanuatu from participating effectively in the formal economy as well as moving up value chains (Cox et al., 2007). For instance, the expectation that those benefitting from financial success distribute the benefits among their family and community reduces the incentives for individual entrepreneurship. The high frequency and likelihood of land disputes and tenure insecurity also reduce incentives to invest.

97. **In addition to natural shocks, features of the agriculture sector play a role in transmitting external macroeconomic shocks.** The concentration of goods exports in only a few low-value-added cash crops exacerbates Vanuatu's trade imbalance and also means that Vanuatu's export earnings are correlated with fluctuations in bulk commodity markets.[20] The managed exchange regime means that there are little offsetting movements in the exchange rate to cushion fluctuations in terms of trade, with implications for the balance of payments, inflation, government revenues, as well as GDP. Such exposure to volatility is considered as one of the main reasons why Vanuatu has underperformed relative to its peers in recent decades (Tumbarello, Cabezon, and Wu, 2013).

[20] Vanuatu's export concentration index among its primary domestic exports (calculated using a normalized Herfindahl-Hirschmann index of the product concentration of merchandise exports) (UNCTAD, 2019) has increased from 0.52 in 2009 to 0.80 in 2019—considerably higher than both the world average and average of developing countries.

98. **Weak institutional capacity in the agriculture sector is a major challenge.** Institutional and management capacity in the agriculture sector needs to be significantly strengthened. Planning and provision of public frontline services, such as farmer extension and outreach programs, needs to be improved. There is need to sharpen agricultural vision and strategy that can bring together diverse agricultural stakeholders and the enhance market-based incentives to invest in and manage the sector.

99. **The limited capacity of the government, governance issues at public enterprises, and the lack of a coherent regulatory framework add further challenges for the agriculture sector.** A legal and regulatory framework is in place to ensure the quality of food and cash crops, though it is generally fragmented and cuts across several ministerial portfolios. This has led to coordination challenges and diffusion of responsibilities. Coordination problems are exacerbated as many departments within the Ministry of Agriculture, Livestock, Forestry, Fisheries and Biosecurity (MALFFB) have not adequately invested in systems and capacities to perform relevant regulatory functions, convene and coordinate stakeholders, and effectively deliver services. Finally, poorly performing commercial government business enterprises—most notably the Vanuatu Commodities Marketing Board (VCMB) and Vanuatu Agricultural Development Bank (VADB)—have constrained agricultural development.

100. **Severe data limitations also constrain the capacity of officials to monitor agriculture activities, flows of finance, and sectoral outcomes.** There is no systematic collection of granular information to inform effective planning and budgeting in the agriculture sector.[21] There is next-to-no real-time data on supply, prices, and demand. Information is generally limited to annual national accounts and balance of payments data, which only provide a general overview, plus occasional large scale national surveys such as the 2007 Agriculture Census, 2009 Census, 2016 Mini Census, and Household Income and Expenditure Surveys (2010 and 2019), plus a few ad hoc market surveys, which offer detailed (but often dated) snapshots of the sector.

4.4 Opportunities for Vanuatu's agricultural sector

101. **The abovementioned constraints notwithstanding, the agriculture sector in Vanuatu can play a role as a future driver of resilient and inclusive growth.** An expanding and maturing domestic market offers farmers an opportunity to increase sales of locally produced food. Growing international demand for premium and niche products derived from existing cash crops is also encouraging farmers to move up the value chain. Reaping these opportunities through coherent investments could turn the sector into an engine of inclusive growth while safeguarding it against the effects of climate change.

[21] A salient example of data limiting the planning and budgeting capacity of the Vanuatu Government is that the 2017–27 Fruit and Vegetable Strategy presently relies on 2008 lending data from the VADB.

102. **A changing domestic market is an opportunity for increased sales of agricultural produce.** Rates of urbanization in Vanuatu are amongst the most rapid in the world, having grown, on average, at around 4.5 percent per annum over the past 25 years. This spatial redistribution of the population, plus the emergence of an increasingly formally employed middle class provides a burgeoning potential market for domestic food crops in urban areas. More generally, increased self-reliance in food production is of critical importance for the whole of Vanuatu in the wake of recent cyclones, which effectively severed food supply chains for extended periods.

103. **There is also considerable untapped growth potential from forging stronger links between the agriculture and tourism sectors.** Tourism has been one of Vanuatu's major growth sectors. Capturing a greater share of the tourism food market can provide a major fillip for agriculture as the sector bounces back following the pandemic. Using data from a survey of hotels and restaurants, International Finance Corporation (2015) identified that there was a raft of meats, seafood, fruits, and vegetables currently consumed in large quantities in the tourism industry (see Table 4-1). Collectively, these products account for half of the value of Vanuatu's fresh produce imports and may be considered for import substitution.

Table 4-1: Food import substitution opportunities

Meat	Seafood	Fruits	Vegetables
Pork Lamb Bacon Beef Chicken	Prawns Fish	Tomatoes Oranges Cantaloupes	Potatoes Onion Carrots Capsicums

Note: Products in which at least 20 percent of the demand (volume) is being met via imports, at least 1 percent of total imports (values), and where it is technically feasible to scale up local production based on inputs from the agricultural experts and stakeholders.

Source: IFC (2015).

104. **Several steps have been taken by the GoV to promote local production over imports.** This includes efforts to shift the demand curve for local produce, changing government procurement rules to focus on local foods, and encouraging a 'Made in Vanuatu' approach in handicrafts. Taxes and tariffs have also been used to facilitate import substitution. To address non-communicable diseases, Vanuatu applies an excise duty to unhealthy (imported) foods, including sugar-sweetened beverages as well as specific meat products, canned meat, canned fish products, sugar, and sugary products. Tariffs are also applied to imported foods as part of its agricultural tariff lines. For instance, to promote investment in local poultry farms, the GoV imposed an additional tariff on chicken eggs imported from non-Melanesian Spearhead Group countries, plus a small levy on eggs imported from Melanesian Spearhead Group countries (Daily Post, 2019).

105. **Favorable market trends are bolstering demand for Vanuatu's commodity exports.** There is increasing global demand for goods containing coconut-based and cocoa-based products (Box 4.2). Global growth is underpinned by rapid expansion in demand for discretionary consumer goods in large middle-income countries, such as India and China. Additionally, the fastest-growing segments within these markets are for premium consumer products (for example, organic oils, and single origin chocolate and coffee), driven by strong and rising demand in high-income countries (UNCTAD, 2020b).[22] These demand dynamics are also playing out in domestic markets via the emerging urban middle classes and the tourist market. Moreover, shifting consumer preferences towards sustainability are driving demand for organic and artisanal production processes. Accordingly, products that are certified organic or carry voluntary sustainability standards (VSS) accreditation, such as Rainforest Alliance, Fair Trade, and UTZ, can command considerable price premiums.

[22] The global market for coconut oil (consisting of 74 percent RBD oil and 26 percent VCO) is forecast to reach US$8.4 billion by 2025, from US$4.9 billion in 2017.

Box 4.2: The versatility of coconut and cocoa

Fresh coconuts can be sold whole at a mature and young state. Mature nuts are used to create a host of different edible and non-edible end-use products. With modest transformation processes, mature nuts can be turned into raw foods such as desiccated coconut, coconut cream, as well as copra when dried. Copra has value as a biofuel and feedstock, though, with the relatively simple application of heat, pressure and chemical solvents can be transformed into crude coconut oil (CNO). CNO can then be turned into refined, bleached, and deodorized (RBD) coconut oil, which is used in cooking, as well as being a starter compound for oleochemicals, which are used in detergents, soaps, and pharmaceuticals. Virgin coconut oil (VCO) is produced by cold pressing fresh coconuts, without industrial processes. Coconut water is also extracted and bottled from young coconuts, albeit with more sophisticated commercial processing and packaging technologies (UNCTAD, 2020b). Other non-food products can be derived from the by-products of coconut, such as the husks, which can be used in construction and furniture. Cocoa is generally exported at various stages on the way to its end-use state, chocolate. Cocoa nibs, which are derived from fermented and dried beans, are milled into a paste—some of which is used as an ingredient of chocolate and some processed into cocoa butter and cocoa powder. In addition to its use in chocolate, cocoa butter is an ingredient in pharmaceuticals and cosmetics. By-products of cocoa production are used in chemicals, fertilizers, and as an energy source (biogas).

Table 4-2: Value-added breakdown of Vanuatu's major cash crops

Stage of transformation	Coconut	Cocoa
Raw/semi-processed	Coconuts (fresh/dried, desiccated or not); coconut kernel; dried kernel (copra)	Cocoa beans
Intermediate	Crude coconut oil; virgin coconut oil; coconut milk and cream; coconut years	Cocoa paste; cocoa butter; cocoa powder
By-product	Kapok fiber; coconut husks (from primary processing); copra cake (from oil processing)	Cocoa husks; shells
High value-added	Bottled coconut water; refined, bleached, and deodorized (RBD) coconut oil; oleochemicals; carpets of coconut fibers and other geotextile products	Chocolate (in any form); sweetened cocoa powder

Source: UNCTAD (2020a); see Annexes 2 and 3 for a detailed schematic of the product space for coconut and cocoa, respectively.

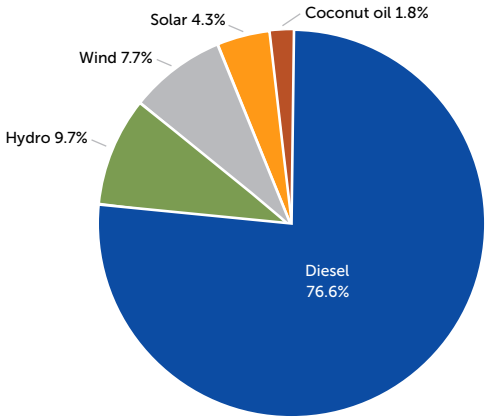
106. **The rapid growth of these commodity markets presents at least two opportunities for Vanuatu's small-scale agriculture sector.** The first is improving the quality of existing products to target higher-end markets. For example, in February 2021, premium copra, which is in high demand in many parts of the world and used for health and cosmetic purposes, commanded a substantial price premium (66 percent) over regular cooked copra. The second is to increase onshore value-add to capture a greater degree of producer surplus within niche premium markets. At present, however, the vast bulk of commodity exports are still concentrated at the low-quality stage with the lowest value-add (see Annex 3 and 4). Focusing, instead, on niche market/export goods through origin branding, certified and premium quality products, which attract higher prices from customers concerned with environmental (organic) friendly production and fair returns to primary producers, can potentially offset geographical disadvantages. The focus on moving up the value chain also offers an opportunity to involve outer islands where cash crops are already grown and capitalize on the 'organic by default' small-scale production model. Furthermore, the additional income generated by moving up the value chain may provide small-scale farm holders a financial buffer against disaster shocks.

107. **A further avenue for agricultural growth may come from being a feedstock for biofuels.** Globally, strengthening demand for biofuels in diesel vehicles and electricity generation is helping underpin the market for crude coconut oil and copra (UNCTAD, 2020a). Using copra in the country as a feedstock for biofuels has several advantages vis-à-vis other sources of energy. In addition to its lower carbon footprint than diesel, copra oil is produced locally from widely available coconut plantations, so fuel is more readily available, and profits are recycled through the economy. Copra oil is also similar in function to diesel, so it is broadly interoperable with much of the existing stock of electricity infrastructure. Unlike solar and wind,

coconut oil can be stored without expensive batteries, increasing its attractiveness as a dispatchable power source. Unlike other bio-oils, such as palm oil, coconut plantations have been established in Vanuatu for a long-time, so there is unlikely to be the same issues with deforestation, habitat loss, and food insecurity from its use.

108. **The growth potential of the domestic biofuels market is significant.** At present, most of Vanuatu's electricity is generated by diesel, with copra oil playing a modest role—mainly limited to the concessions of Port Vila and Malekula (Figure 4-3). As part of its Paris Climate Commitments, the Government of Vanuatu has set a Nationally Determined Contributions target of close to 100 percent renewable energy in the electricity sector by 2030 (Republic of Vanuatu, 2015). The implementation roadmap suggests that substituting fossil fuels with coconut oil-based electricity generation will play an important role, requiring between 6 to 12.5 million liters of coconut oil per year (Republic of Vanuatu, 2019).[23] According to UNELCO—one of the two electricity utilities in the country—the current copra stock would be sufficient to generate 20 million liters of copra oil per year. Furthermore, COPSL, the largest exporter of Vanuatu coconut oil, estimates that coconut-based biofuel can be competitive vis-à-vis imported fuels. Therefore, substantial opportunities exist to grow the domestic biofuels market. It is important to note, though, that the biofuel market requires high transportation and labor costs, which risk undermining the economic viability of this activity. Furthermore, expanding the biofuel market may lead to competition with other land uses—such as growing food—and could potentially endanger biodiversity.

Figure 4-3: Vanuatu electricity generation (2019)*



* In the main concession areas of Port Vila, Luganville, Malekula (Lakatore) and Tanna (Lenakel) in which the two main utilities, UNELCO and VUI are operating.

Source: URA

[23] This equates to between 12 and 23 tonnes of copra per year for biofuels. To put into perspective, the average amount of copra exported between 2009 and 2019 was 15.6 tonnes.

4.5 Policy implications

109. **To respond to the challenges in the agricultural sector and reap its opportunities, Vanuatu needs a multi-pronged approach.** Policies, public actions, and investments need to focus on enhancing the sustainability and resilience of agriculture, especially given Vanuatu's status as the most vulnerable country in the world to natural disasters. Integrated risk management frameworks that cover human–animal relations through the adoption of the One Health approach and increased insurance and social protection may help to increase resilience. Furthermore, there is a need to address the productivity challenges of the subsistence sector and improve the nutrition-sensitivity of the food system. This will help to tackle the triple burden of obesity, micronutrient deficiency, and under-nutrition. Next, steps are needed to foster the enabling environment for investment and market deepening, including the development of food processing and food-related services.

110. **Going forward, action needs to be organized at various levels.**[24] First, at the farmer level, there is a need to build up local food systems for enhanced resilience, productivity, and diversification. Second, at the sectoral level, an enabling environment for inclusive agricultural growth is needed, including through policy reform and restructuring of public expenditures. Third, at the general government level, the agricultural sector would benefit from enhanced resilience and disaster management as well as cross-sectoral support for rural development. Finally, at the strategic level, the diversification into new products and markets, as well as links with other sectors like tourism, could generate broad-based growth opportunities.

111. **At the farmer level, it is essential to enhance local food systems, boosting productivity and resilience, and enhancing nutrition.** Support needs to be provided for family-based production, capable of supplying sufficient quantities of food that is high-quality, affordable, diverse, and nutritious. Increasing the productivity and competitiveness of local nutritious foods can also help reduce the reliance on imports. It could also support traditional knowledge and sustain a wealth of biocultural heritage—including underutilized traditional crops, a diverse range of fruits and vegetables best adapted to the effects of climate change, and appropriate production of animal-source products—that would allow for a positive shift in eating choices while boosting national economies.

112. **At the sectoral level, the government should strategically address a limited number of clearly identified priority issues.** Policy reforms to strengthen growth prospects and improve service delivery should be undertaken. Improving service delivery to rural areas should be given high priority. Capacity building of relevant public institutions should be undertaken so they can upgrade their ability to provide

[24] The country's Agriculture Policy 2015–30 and the agriculture sub-sector strategies broadly reflect these actions and are thus important levers for policy implementation.

vital public goods (including extension services, training, and market price information). The government should strengthen partnerships with NGOs and CSOs to serve in locations where government service is limited or absent. Relatedly, research is playing a key strategic role in promoting resilience by helping to develop climate-smart crop varietals, and better adapting local genetic material to Vanuatu's soil characteristics, farming systems, and extreme exposure to weather incidents.[25] Furthermore, increasing the mechanization of farming practices by providing access to farming and fishing tools is an important component to improve productivity.[26] Replanting efforts and seed distribution by MALFFB are helping interested farmers renew old and destroyed crops.

113. **At the general government level, cross-cutting actions should be taken to strengthen resilience and enhance prospects for rural development.** There is a need to promote climate change adaptation and the sustainable management of natural resources that will help build resilience, preserve biodiversity, and improve responses to climate change impacts and natural disasters. Enhancing early warning systems and better forecasting should be undertaken to help smallholder farm planning and preparedness and improve small-scale fisheries. The government should also consider mechanisms and investments to enhance financial inclusion, rural insurance, and social protection.[27] Developing and expanding dedicated programs in this regard can help island farmers insure against disasters, avoid distress sales, stimulate entrepreneurship, and deter migration to poorly facilitated urban areas. Over time it can help smallholders to accumulate assets, adopt new crops and technologies, and pursue climate-resilient and nutrition- sensitive agriculture. To achieve those goals, there is a need to strengthen bureaucratic capacity and address deficiencies in governance, including in human resource management, inter-agency cooperation, and reforms in government business enterprises (for example, the VCMB, and VAD).

114. **At the strategic level, the government needs to invest in emerging opportunities for value-added goods and services in niche markets at local, regional, and international levels**. First, it is necessary to ensure that producers receive the right incentives and that governments make strategic investments that will bolster the potential of the agricultural sector and assist with its transformation. Second,

[25] The Vanuatu Agriculture Research and Technical Centre (VARTC) is playing a key role in developing root crops that are resilient in the face of climate change and pest-resistant cash crops. Development partners and NGOs are also active in training farmers to test new crop varieties, adopt climate-resilient agriculture and water-use techniques, and fortify infrastructure and assets to the threats of disasters.

[26] The Government of Vanuatu, supported by development partners, is already focusing on distributing farming and fishing tools and increasing the mechanization of farming practices.

[27] A number of financing mechanisms are currently available, including a concessional facility designed to promote the flow of credit to SMEs involved in exports and import substitution. While notionally available to the agricultural sector, uptake of the instrument by agricultural producers has been low, limited by the general unavailability of banking services (Tiwok, 2018). Furthermore, attempts have been made to facilitate collateral requirements, including the involvement of village chiefs in the rural areas. While the reforms have generally strengthened the financial system, the benefits do not yet appear to have flowed fully to the agricultural sector (RBV, 2017). A credit guarantee scheme to subsidize loan collaterals for small farm holders may ease credit constraints.

investment in marketing and quality certification—in collaboration with the private sector and international organizations and NGOs—can create a mechanism through which environmentally conscious consumers could be accessed internationally. Over time, such initiatives may evolve in a more coordination approach to export promotion for Vanuatu's commodity exports. Third, promoting domestic production over imports may bring many benefits, but market-distorting measures need to be well designed and highly targeted.[28] Beyond niche products and markets, the government should exploit the inter-linkages between agriculture and other sectors such as tourism, which provide a genuine opportunity to bring high-value demand closer to farmers. In this regard, a robust system to uphold minimum standards of quality and consistency is needed.

[28] The potential benefits of import substitution in food production are numerous, including a transfer of wealth to local farmers, promotion of infant industries and other multiplier effects through the macroeconomy. There are also important positive social externalities in the form of improved food security and nutrition. However, market-distorting measures, such as tariffs, excises, and import bans should be highly targeted on the least- healthy foods. High levels of applied tariffs on healthy food imports risks exacerbating issues of food insecurity and malnutrition. Domestic producers' relative inefficiency (compared to overseas producers) may drive up prices for consumers. Finally, tariffs may strengthen certain import-substituting businesses, which could lead to vested interests and distortions in the political market. It is therefore also important to take dynamic political economy considerations into account in the design of import substitution policies.

5. Labor mobility

115. **This section discusses Vanuatu's labor mobility programs.** Section 5.1 discusses Vanuatu's labor market, with a specific focus on the country's labor mobility programs. Section 5.2 analyzes the impact of COVID-19 on the labor market and seasonal workers of the different labor mobility schemes. Section 5.3 discusses both near-term and long-term challenges and opportunities for Vanuatu's labor mobility schemes, including how they can assist with natural disasters, the transition towards a government- managed model, gender aspects, and potential unintended consequences. Based on this analysis, Section 5.4 draws some policy implications.

5.1 The labor market in Vanuatu

116. **Vanuatu's labor market is characterized by high levels of unemployment, limited formal sector employment, and widespread informality.** In 2019, 9.4 percent of the working-age population were unemployed and another 14.6 percent experienced time-related underemployment. Unemployment is markedly higher among youth aged 15–24 years old (32.9 percent). Across the country, informal work accounts for more than 70 percent of all employment with the exception of Port Villa and Luganville. In the extreme cases of Penama, Torba, and Malampa about 90 percent of workers engage in informal jobs (see Figure 5-1).

117. **The country's moderate labor participation rate masks important gaps between the sexes as well as spatial disparity.** The overall labor force participation rate in Vanuatu (51.1 percent in 2019) is compatible with other countries of similar income level. The participation rate among females is 17.3 percentage points lower than among their male counterparts (42.3 percent vs. 59.6 percent). The latest Household Income and Expenditure Survey also shows that women have a higher rate of employment in the informal sector than men. In addition, employed women are more concentrated in the sectors that are expected to experience a high degree of disruption. There also exists wide disparity in labor participation across regions. Shefa (66.8 percent), Port Vila (61.6 percent), and Luganville (59.5 percent) have the highest labor force participation rates in the country, while the outer islands of Tefea (30.3 percent) and Torba (32.3 percent) have the lowest (see Table 5-1).

118. **The services sector and agriculture are the main sources of jobs.** The services sector accounted for nearly half of all employment in 2019 (see Table 5-1). At a more disaggregate level, the main services in terms of share of employment are wholesale and retail trade (13.2 percent), food and beverage services (5.6 percent), and education (5.6 percent). This composition largely reflects the country's reliance on tourism. Agriculture is another main source of employment, with about 37.3 percent of employed workers. The government employs 27 percent of the working-age population.

Table 5-1: Key labor market indicators (2019)

	Port Vila	Luganville	Shefa	Torba	Sanma	Penama	Malampa	Tafea	Total
Labor force participation rate (%)	61.6	59.5	66.8	32.3	40.8	39.7	46.8	30.3	50.2
By economic industry (% distribution)									
Agriculture, forestry, and fishery	3.6	10.4	36.4	61.4	62.6	69.7	71.7	52.4	37.3
Industry	12.1	14.6	10.1	8.1	3.0	5.8	2.6	11.1	8.9
Services	80.8	73.6	47.5	27.2	29.3	18.5	22.1	30.8	49.4
Economic activity not classified	3.5	1.5	6.0	3.4	5.2	6.0	3.6	5.7	4.4
Share of informal employment (%)	38.7	46.3	73.6	88.6	80.4	91.8	87.8	84.8	66.9
Labor underutilization rate (%)	11.2	27.4	34.0	23.6	51.0	41.4	31.1	27.4	29.6
Time-related underemployment rate	6.2	21.6	16.6	15.1	23.4	22.0	19.1	4.5	14.8
Unemployment rate	3.8	1.3	14.6	4.8	15.1	3.3	7.7	4.5	7.9
Potential labor force rate	1.4	5.9	4.0	4.5	20.3	21.6	6.0	20.2	8.9

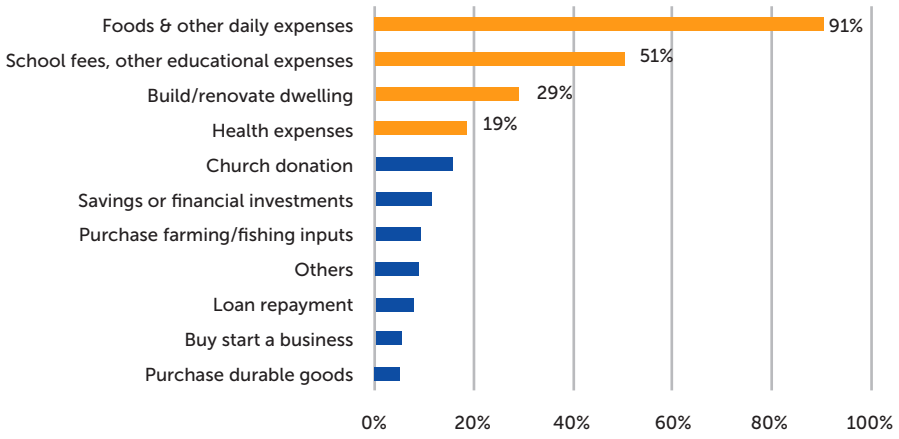
Source: Authors' own calculations.

119. **Given limited formal job opportunities in the domestic market, labor mobility plays an important role in providing employment and income opportunities to ni-Vanuatu workers.** A large and increasing number of ni-Vanuatu have found seasonal jobs—mainly in horticulture—in New Zealand's Recognised Seasonal Employer (RSE) scheme and Australia's uncapped Seasonal Worker Programme (SWP). The largest contributing country to these two schemes, Vanuatu, accounted for 41 percent of all workers in 2018–19. Vanuatu's participation in Australia's newer and semi-skilled Pacific Labour Scheme (PLS), however, is more modest, at only about 10 percent of total workers as of January 2019. Together, participants under the three schemes accounted for 8.1 percent of Vanuatu's total workforce in 2018–19, up from 6.3 percent in 2017–18.

120. **Remitted income from overseas work supports the livelihoods of labor sending households.** In 2019, international remittance inflows amounted to 3.7 percent of the country's GDP, putting it among the top 10 remittance receiving countries in the Asia and Pacific region. At the same time, about 5.9 percent of households reported receiving remittances from overseas, according to the HIES 2019. Remittances are used to cover the payment of basic food items and daily expenses,

school fees, health expenses, and construction and renovation of dwellings (see Figure 5-1). Consequently, a reduction in remittances from seasonal workers could threaten labor sending households' food security and increase their vulnerability to economic hardship.

Figure 5-1: Usage of remittances in Vanuatu



Source: World Bank staff calculation based on data from the World Bank phone survey on impacts of COVID-19 on Pacific labor migration and remittances.

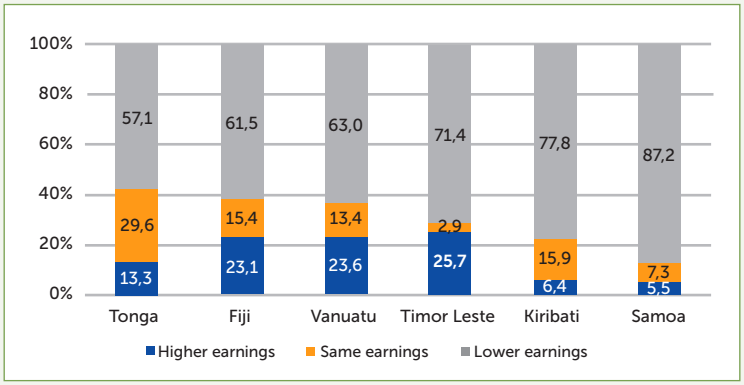
5.2 Labor mobility and the COVID-19 crisis

121. **While Vanuatu has avoided a COVID-19 outbreak, the pandemic and the suspension of international travel have been devastating to the country's labor market.** As the country closed its border to international visitors and the number of tourist arrivals plummeted to zero, Vanuatu saw a drastic reduction of approximately 64 percent in tourism-related jobs after the onset of the pandemic (Vanuatu, April 2020). With about 36 percent of all employed workers engaging in tourism-related work, the impact on the tourism sector alone caused a decrease in overall employment of nearly 23 percent.

122. **Job vacancy data confirm broader reductions in job advertisements in both the private and public sectors and across almost all occupational categories.** The adverse impact on employment appears particularly detrimental to semi-skilled workers. Technicians, associate professionals, trade workers and service and sales workers, who are often less likely to be able to work remotely, experienced the largest drop. Furthermore, the extent of job losses in the informal sector could be even larger than in the formal sector, as micro and small businesses bear the blunt of the tourist dry-up and local social distancing measures.

123. **The COVID-19 pandemic has severely worsened the earnings of seasonal workers.** Nearly two-thirds (63 percent) of ni-Vanuatu seasonal workers in Australia and New Zealand experienced fewer work hours and lower earnings as compared to the pre-COVID-19 months of January–February 2020 (Figure 5-2). Among these workers, the average decrease in weekly earnings was significant at 48.1 percent. Associated with this income loss, about 7.9 percent expected that their total earnings from the 2020 work season would be insufficient to cover their pre-departure costs. A considerable minority reported earning more after the lockdowns in March 2020. However, most of these workers had worked below their capacity with fewer hours, and earned relatively less than their peers before the pandemic. These workers were therefore more likely to benefit from the seasonal shortage of farm labor that arose as borders were closed.

Figure 5-2: Changes in weekly earnings of RSE and SWP workers after COVID-related lockdowns



Source: World Bank staff calculation based on data from the World bank phone survey Timor Leste Kiribati on impacts of COVID-19 on Pacific labor migration and remittances.

124. **Given the reduction in earnings, remittances from seasonal workers significantly decreased, leading to worsened wellbeing of labor sending households.** About 44.1 percent of ni-Vanuatu working in the RSE and SWP schemes lowered remittances as compared to the pre-COVID-19 period. On average, the amount they remitted in each transaction fell by 54.1 percent. Remittances have also become less frequent; when surveyed between June and September 2020, about 12 percent of ni-Vanuatu workers in the SWP and RSE schemes had not sent any money home since March 2020 and nearly half of those cases were because they had not earned enough yet. As a result, the income of labor sending households declined. For instance, 22 percent of labor sending households to Australia and New Zealand reported falling without income.

125. **The impacts of COVID-19 on PLS employment have been somewhat milder given the non- seasonal nature of PLS employment and the longer contract periods.** Overall, 34 percent of PLS workers surveyed by the World Bank reported increased savings since the start of the pandemic.[29] However, most workers had not expanded

[29] PLS worker surveys covered 61 workers from Fiji, Kiribati, Nauru, PNG, Samoa, Solomon Islands, Tonga, Tuvalu, and Vanuatu. Ni-Vanuatu workers accounted for 18 percent of those surveyed.

their consumption due to uncertainty around the pandemic. PLS employment covers many industries including hospitality and tourism. Some of these industries have suffered high job losses due to COVID-19 restrictions. The Pacific Labour Facility has responded by redeploying impacted PLS workers into other industries. For example, some tourism workers have been reassigned to work in less affected industries such as aged care. PLS workers are employed on longer contracts than SWP or RSE workers. Consequently, PLS workers have been largely unimpacted by issues relating to repatriation. However, should travel restrictions continue over the medium term, PLS workers will face similar issues to seasonal workers around repatriation and contract extensions.

5.3 Challenges and opportunities for Vanuatu's labor mobility schemes

126. **Despite the COVID-19 crisis, there are still positive prospects for labor mobility opportunities.** Demand for seasonal labor from both Australia and New Zealand remains strong as holidaymakers, who account for about 60 percent of seasonal farm labor, are unlikely to be able to return for some time. The same advantage might be evident in other areas, such as semi-skilled work under the PLS, as the Australian and New Zealand economies recover from the crisis, but inward migration remains constrained. Some 98 percent of SWP and RSE employers surveyed by the World Bank during the second half of 2020 expressed the intention to hire Pacific/Timorese workers in 2021. About half of these employers expected to hire even more seasonal workers than they did in 2020.

127. **Recent pilots to bring Pacific workers to Australia and New Zealand demonstrate the possibility of ongoing seasonal work that complies with quarantine and testing requirements.** Both the Australian and New Zealand government experimented with loosening border restrictions to bring in seasonal workers in the horticulture sector. To date, employers and governments have carried most of the costs associated with charter flights and managed isolation. New Zealand has taken a country-wide approach whereby employers cover costs associated with quarantine and pay workers a living wage during this period. The government also mandated adequate quarantine facilities for returning workers. In Australia, state governments and industry have contributed to travel and quarantine costs, however, arrangements are being negotiated on a case-by-case basis.

128. **With more employers joining the PLS, there are opportunities for Vanuatu to increase participation rates.** By March 2020, there were 51 employers actively recruiting for the PLS. With a total 87 endorsed employers and a further 235 employers going through the application process, this could see PLS participation numbers reach around 7,000 in the near future. If Vanuatu could raise participation rates to a similar level as the seasonal labor mobility schemes, it could roughly increase the number of PLS workers to 2,899. Reaching this target may require targeted skills training to supply labor for industries such as aged care, trades, and commercial cooking.

129. **Over the long term, the skills and experiences gained by ni-Vanuatu overseas have the potential to add to the productive and entrepreneurial capacity of the Vanuatu economy**. Almost all ni-Vanuatu workers (98 percent) believed skills learned in Australia would help them gain employment at home (World Bank, 2017). A large proportion of workers acquired transferrable skills such as English language proficiency. The possibility of taking part in labor mobility schemes incentivizes ni-Vanuatu to increase their education and training. Higher human capital and additional skills may increase output per worker and help to spur innovation.

130. **The use of remittances and savings from labor mobility schemes can aid in responding to natural disasters.** For instance, in 2015 RSE workers used their savings to rebuild housing and other infrastructure destroyed by TC Pam. Employers of ni-Vanuatu workers have often donated items such as building materials, water pumps, and chainsaws to help communities rebuild from natural disasters (Bailey and Ng Shui, 2016). While useful, such support will be insufficient, with remittances and savings from labor mobility schemes only available in significant amounts in communities where there is large-scale participation in labor mobility programs.

131. **The provision of adaptive social protection payments to households offers the prospect of more broad-based support.** Formal social protection in Vanuatu is currently limited to a small portion of the population. The Vanuatu National Provident Fund (VNPF) provides retirement, disability, and survivor benefits to its membership base, but this only covers the formal sector, and the majority of the population is employed in the informal sector. The Family Assistance Support Program supports destitute families or households whose livelihoods depend on an inadequate source of income. Most households in Vanuatu, however, are reliant on traditional safety nets, based on community, family, and kinship ties. As has been discussed, these are inadequate when the community at large is affected by a shock, such as in the case of large-scale disasters (Pelham et al., 2011). Vanuatu's limited social protection infrastructure and its exposure to natural disasters point to the benefits of expanding investments in adaptive social protection as an effective policy measure to reduce the impacts of natural shocks and stressors on vulnerable and poor households.[30]

132. **The materialization of opportunities for Vanuatu is uncertain, given the transition to a government-controlled labor mobility scheme.** Up until now, Vanuatu relied on a combination of an agent model and direct recruitment for its labor mobility

[30] A World Bank evaluation of Fiji's top-up social assistance payments provided to beneficiaries of the Poverty Benefit Scheme demonstrates that while both poor and near-poor households were similarly affected by TC Winston, households receiving the top-up transfers were quicker to recover from the disaster shocks. Ninety-nine percent of the top-up amount was spent on essential items, such as food, housing repair materials, clothing, and school supplies (Mansur et al., 2017).

schemes. SWP employers relied more on licensed agents, while RSE employers preferred direct recruitment.[31] In both schemes, a few large employers hire the majority of the workers. Despite the success of the agent system, there have been ongoing concerns about agents charging illegal fees to workers. Furthermore, issues have arisen with unlicensed agents taking payments for jobs that do not exist. Also, geographical inequity is an issue with current recruitment practices focused on urban areas. As a response, the GoV announced an intended move away from the agent system of recruitment to a government-controlled work ready pool.

133. **The government's system will only be implemented following a transition period. The proposal has been approved by the Council of Ministers and will go to Parliament in the first half of 2021.** Should the legislation pass, there will be a 12-month transition period away from the agent system. While the specifics of the new recruitment model have not yet been confirmed, the government also intends to use it to raise revenue. This may erode Vanuatu's competitiveness relative to other Pacific Island Countries, which may lead Australian and New Zealand employers to substitute ni-Vanuatu workers with those from other PICs. Furthermore, uncertainty around the changes could lead to either decreased recruitment or slower growth in the number of ni-Vanuatu workers recruited.

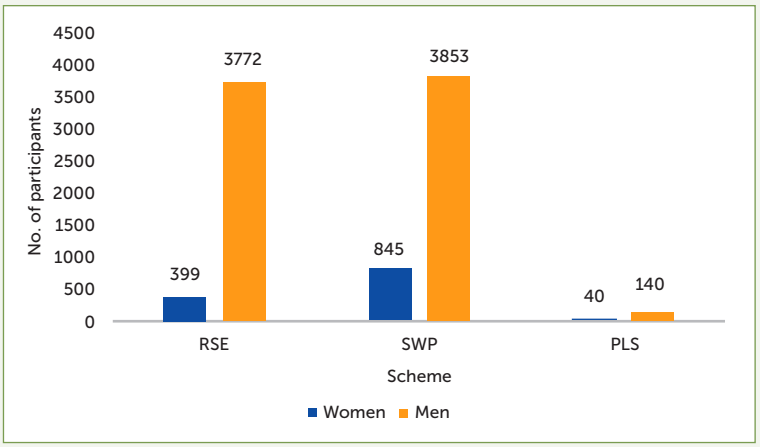
[31] A total of 93 percent of the 1,012 ni-Vanuatu SWP workers recruited between January and October 2018 were hired via licensed agents. By contrast, in 2018, 1,953 ni-Vanuatu participated in the RSE with 78 percent of these workers recruited via direct recruitment. In both schemes, a few large employers hired the majority of workers. In 2018, two-thirds of all SWP workers were recruited by four labor hire companies, while 44 percent of all RSE workers were recruited by five large employers (Curtain and Howes, 2020).

134. **Other approaches to reform are available which could address existing issues.** Such changes might involve GoV support for and investment in a functional government-led recruitment system which operates alongside a model by private sector agents, combined with reforms to the agent model such as stricter licensing arrangements for agents and formalization of the relationship between agents and employers (Curtain, 2019; Curtain and Howes, 2020).

135. **A poorly handled transition away from the agent model could have real economic and development implications for Vanuatu.** If pre-COVID-19 trends in seasonal labor supply continue, as much as 8 percent of Vanuatu's population could be participating in labor mobility by 2040. In that scenario, net income from seasonal work may reach as much as $A 294.3 million. On other hand, if ni-Vanuatu participation plateaus at just over 8,000 workers per year, just 1.8 percent of the population would participate in labor mobility schemes, resulting in a net income of $A 66.3 million by 2040. These projections underline the importance of ensuring any changes to the current system are carefully considered and responsive to employer needs. This is particularly important given the greater potential for growth in the uncapped SWP scheme, and the existing preference of SWP employers to recruit via agents.

136. **Gender equity in recruitment is a key challenge to expanding labor mobility participation rates.** Female participation in the seasonal migration schemes has been low. Women accounted for less than 4 percent of total SWP and RSE workers during the 2017–18 season (see Figure 5-3). While men also dominate the PLS overall, gendered recruitment patterns vary by industry. Across PICs, more women (73 percent) than men (64 percent) are employed in hospitality, while the aged care industry almost exclusively employs women.

Figure 5-3: Gendered participation in the SWP, RSE and PLS amongst ni-Vanuatu



Source: Figures provided by Australian and New Zealand governments. SWP figures refer to the period 2018-2019, RSE figures refer to 2016–17 and PLS figures refer to 2018–March 2020.

137. **Concern exists over the potential negative social impacts of increased labor migration.** Research suggests that women are often left with a greater burden of work during their husband's absence (child caring, agricultural work, domestic labor) (World Bank, 2018). Repeated separation can take an emotional toll, and wives and children commonly report missing their husbands and fathers (Bailey, 2014; Bedford et al., 2020). Similarly, separation can put pressure on marriages and partnerships, and may lead to family breakdown (Bedford et al., 2020).

138. **There is an ongoing debate around the perceived tension between domestic labor supply and participation in temporary labor mobility schemes**. Concerns are raised over reduced local incentives for returned workers to undertake low wage employment or engage in subsistence agriculture. Furthermore, domestic employers may lose experienced workers to the schemes or fail to hire skilled staff because of labor mobility. Some studies indeed suggest that seasonal workers may disengage from subsistence agriculture (Bedford et al., 2020; Craven 2015). However, there is also evidence that seasonal workers pay community members to work in their gardens while they are away (Bedford et al., 2020). As mentioned, there are reasons to think that participation in labor mobility may increase productivity in Vanuatu in the medium to long term through improved access to finance and skills development.

5.4 Policy implications

139. **Labor mobility schemes will be an important component to support economic recovery until travel restrictions are eased.** Ongoing international travel restrictions and limited commercial flights mean it will take some time for tourism to return to pre-COVID-19 levels. Domestic unemployment is therefore likely to remain high. At the same time, the horticultural industries in Australia and New Zealand are struggling to meet labor needs. Employers and industry have actively lobbied state and federal governments to restart the SWP and RSE. Expanding Vanuatu's participation in the seasonal worker schemes could provide a solution to both high domestic unemployment and international labor shortages and may aid in economic recovery from the pandemic.

140. **In the medium term, Vanuatu should focus on maintaining and growing its share of participation in the labor mobility schemes, particularly in the uncapped SWP and PLS.** Doing so will require continuing government efforts to engage with Australian and New Zealand employers and governments. This will be particularly important in the context of a post-COVID-19 world and proposed changes to recruitment practices. It will be vital to ensure these changes continue to cater to employer needs without increasing administrative or other burdens. Accountable and transparent recruitment, selection, and processing arrangements are essential. The government should also consider its role in supporting workers overseas

through, for example, the use of labor attachés or liaison officers (in-country support personnel). This will facilitate accessible in-person support to employers and workers overseas, assist in resolving issues promptly, and making sure that employer expectations and requirements are being met. Ensuring that these arrangements are well-coordinated and adequately resourced should be a priority.

141. **Efforts should be made to align education and training with labor market demand.** Semi-skilled employment opportunities under the PLS are dependent on ni-Vanuatu applicants possessing the necessary skills. In some cases, workers will also need qualifications that are recognized in Australia. Government and other providers should ensure that TVET courses in Vanuatu target the fields in demand under the PLS. Where qualification recognition is needed, support for worker participation in Recognition of Prior Learning should be considered. The connection between acquiring these skills and accessing labor mobility opportunities should be clearly communicated with the public. TVET providers should be kept up to date with information about labor markets in Vanuatu, Australia, and New Zealand. Utilizing labor market information to inform training will also provide a means to address employer concerns over skills shortages.

142. **It is important to minimize the adverse social and economic impacts of labor mobility.** The loneliness and homesickness sometimes experienced by ni-Vanuatu workers overseas can lead to a deterioration in their physical and mental health. Such risks can be mitigated through the provision of culturally appropriate pastoral care and the appointment of in-country liaison officers. Effective pre-departure training is critical, and there is scope to include the families of workers in some of these activities. Training needs to be resourced adequately so that it can cover a broad range of areas, including soft skills, work ethic, managing separation from families, and financial literacy. Community-based support programs for the families of seasonal workers must be strengthened. The government must allocate resources to ensure services are both comprehensive and accessible, with an appropriate gender focus. Finally, more research is needed to examine the impact of labor mobility on the country's productive capacity and domestic labor supply.

143. **Given the high frequency of natural disasters, complementarities between traditional support to families and government-led adaptive social protection programs need to be explored.** The impact of 2020 events on poor households has demonstrated the need for social protection instruments that are scalable, timely, and adaptable in times of future covariate shocks in Vanuatu. Examples from the region could inform social protection reforms in Vanuatu. For example, Fiji has been providing cash transfers to social assistance beneficiaries and to the unemployed and underemployed affected by the COVID-19 crisis and the tropical cyclones of 2020. At the same time, it invested in the development of an adaptive social protection strategy, enhancements to the delivery system by ensuring systems' interoperability among various programs, and supporting employment and self-employment services for formal and informal workers.

6. Tourism

144. **This section provides an economic analysis of Vanuatu's tourism sector.** Section 6.1 gives an overview of Vanuatu's tourism sector. Section 6.2 shows how the tourism industry has been deeply affected by TC Harold and COVID-19. Section 6.3 discusses the challenges and opportunities for Vanuatu's tourism sector in a post-COVID-19 world, including the need to reposition the industry. Section 6.4 concludes with some policy implications.

6.1 The tourism sector in Vanuatu

145. **The tourism sector is a mainstay of Vanuatu's economy.** According to the World Travel and Tourism Council (WTTC),[32] tourism and travel contributed 34.7 percent to GDP and 67.3 percent of total exports in 2019. Tourism has also been a key contributor to employment (41 percent of total employment in 2019) and government revenue (5 percent of GDP in VAT revenue in 2019) in Vanuatu. International arrivals by air to Vanuatu spent a total of VT 31.7 billion while the overall value of the cruise ship tourism to Vanuatu was estimated at VT 1.7 billion in 2019.

146. **International arrivals comprise the majority of Vanuatu's tourism industry.** The international tourism market contributed 94 percent of tourism spending in 2019, with the domestic visitor market contributing only 6 percent. Domestic spending is lower than neighboring countries such as Fiji where 19 percent of tourism spending was attributed to domestic travelers. The Vanuatu tourism industry is also highly reliant on leisure visitors, as 89 percent of tourism spending falls under the leisure category with only 11 percent of expenditures by business travelers.

[32] The WTTC applies the UN Statistics Division approved Tourism Satellite Accounts methodology to quantify the direct contribution of travel and tourism. See WTTC/Oxford Economics (2020) for more detail.

147. **The majority of tourism to Vanuatu takes place in the Shefa province.** With 96 percent of air arrivals visiting Etafe—the main island of the Shefa Province—it serves as the international gateway to Vanuatu. The outer islands of Tanna and Santo receive only 18 percent and 16 percent of air arrivals, respectively. Cruise tourism is more evenly distributed and less skewed toward Efate; 46 percent of cruise ship port calls in 2018 were in Efate, 42 percent in Mystery Island (Tafea Province), and 6 percent in Luganville (Sanma Province). In terms of total visitor spending, Shefa, Tafea, and Sanma provinces capture the greatest share of visitor spending—74.4 percent, 7.3 percent, and 10.7percent of total expenditure, respectively.

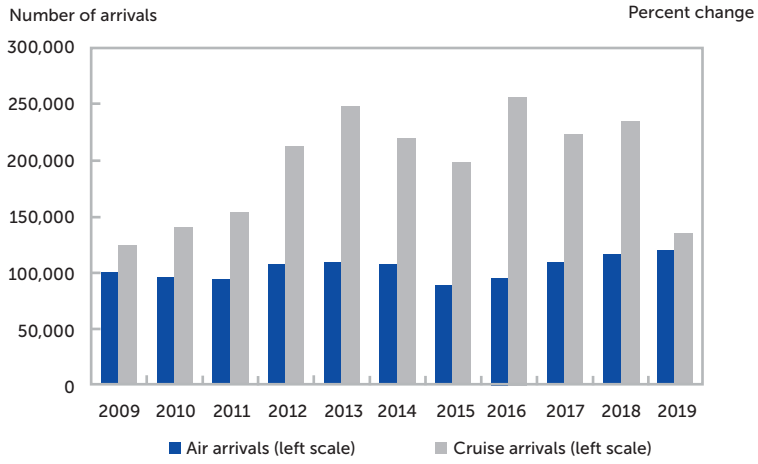
Table 6-1: Distribution of annual visitor expenditure by province

Province	2018		
	Air	Cruise	**Total**
Shefa	74.3%	76.1%	**74.4%**
Tafea	7.0%	12.1%	**7.3%**
Sanma	10.7%	11.1%	**10.7%**
Malampa	2.7%	0.0%	**2.5%**
Penama	0.6%	0.6%	**0.6%**
Other (unassigned)*	4.7%	0.0%	**4.4%**

*Outside of Efate, Tanna, Santo, Malekula, Pentecost, and Ambrym, visitor arrivals and expenditure for remaining islands are projected collectively as a group of 'other' islands.
Source: World Bank estimates based on data from Vanuatu's 2018 International Visitor Survey (IVS).

148. **International tourism arrivals have not grown significantly over the past decade, in part due to the effects of natural disasters.** In 2019, Vanuatu received 120,628 international air arrivals compared to 100,675 in 2009 (Figure 6-1). This represents an average annual growth rate of only 1.8 percent. Arrivals during this period were significantly affected by TC Pam in 2015 and runway maintenance issues with Port Vila Airport as of 2016. Cruise ship visitor numbers, which peaked in 2016 at 256,482, have been declining amidst ongoing visitor management efficiency issues at the Port Vila wharf, technical docking bollard complications at Luganville's cruise terminal, growing capacity constraints at key regional ports of departure, and shifting itineraries of the large Pacific cruise operators. TC Pam also led to a significant drop in cruise ship arrivals; 197,471 cruise ship passengers arrived in 2015, a 10 percent drop compared to 2014.

Figure 6-1: International tourism arrivals to Vanuatu by air and cruise ship (2009–19)

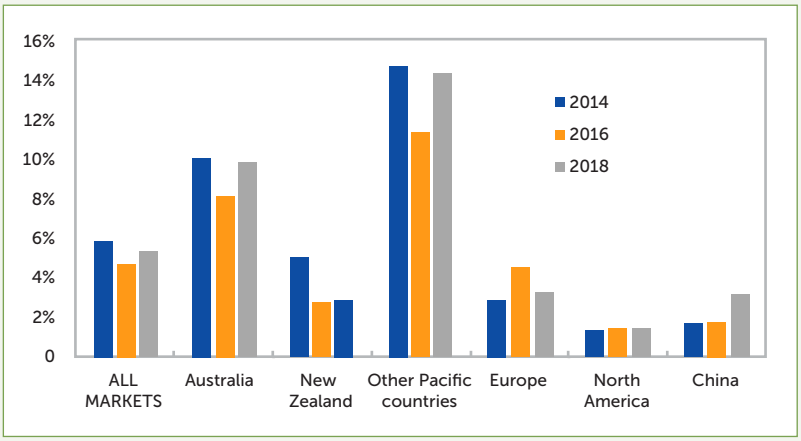


Source: Vanuatu National Statistics Office (VNSO).

149. **Vanuatu has had limited success in diversifying its visitor base beyond its traditional core markets.** Collectively, arrivals from Australia (52 percent of the total), New Zealand (13 percent), and New Caledonia (12 percent) account for more than three-quarters of Vanuatu's visitor base. Only 7 percent of arrivals come from Europe and 5 percent from other PICs. China has been Vanuatu's fastest growing source market over the past five years (25 percent per year on average), but still only accounts for 4 percent of arrivals.

150. **Vanuatu's competitiveness as a destination from these source markets has been eroding in recent years, in part due to the effects of natural disasters.** Compared to 2014, a lower share of outbound travelers to PICs from Australia and New Zealand visited Vanuatu in 2018. Much of the decline occurred in 2016 in the aftermath of TC Pam and has almost fully recovered in the case of Australia and the other Pacific source markets (Figure 6-2). Meanwhile, the loss of market share from New Zealand outbound to PICs appears to be more persistent, reflecting the suspension of flights by Air New Zealand to Vanuatu in 2016 amidst concerns about runway conditions at Port Vila Airport.

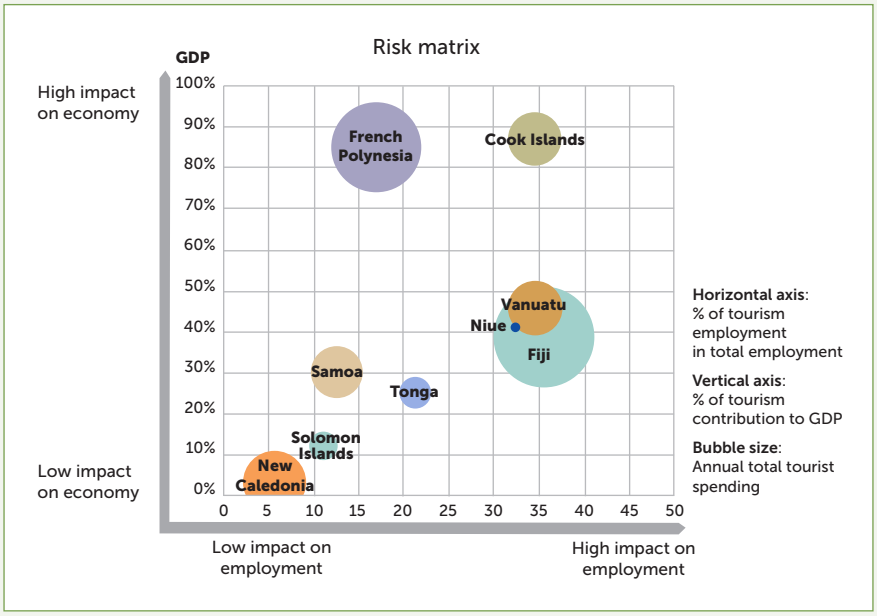
Figure 6-2: Vanuatu's share of outbound travel to PICs from key source markets (2014–18)



Source: VNSO, UNWTO, SPTO.

151. **The dependence of Vanuatu on the tourism sector leaves it highly vulnerable to tourism shocks.** The reliance of tourist inflows on only a few source markets makes the country highly vulnerable to demand fluctuations in these markets. Furthermore, tourism's contribution to employment, GDP, and exports makes the country particularly exposed to (external) tourism shocks. Figure 6-3 presents a risk matrix for tourism industry vulnerability in the Pacific, indicating that Vanuatu is one of the more vulnerable nations in the region.

Figure 6-3: Risk matrix for tourism industry vulnerability in the Pacific



Source: SPTO Pacific Tourism Sector Status Report.

6.2 Tourism, COVID-19, and TC Harold

152. **In response to the COVID-19 pandemic, Vanuatu declared a state of emergency, leading to a virtual standstill of the tourism industry.** In terms of travel, domestic flights were suspended and international borders closed to visitors since mid-March 2020. This has caused a complete halt on tourism arrivals, leaving Vanuatu's tourism industry particularly vulnerable due to its high reliance on international markets. In addition to the halt on air arrivals, all cruise tourism to Vanuatu was suspended in March 2020. As a result of these travel restrictions, almost 100 percent of tourism operators have shut down.

153. **While TC Harold did not affect tourism income, it did cause damage to tourism assets.** The state of emergency and related restrictions were installed before TC Harold struck the country, so no impacts on tourism income are attributed to TC Harold. However, TC Harold caused significant damage to the northern islands of Vanuatu, including the Samna Province, which normally captures the second largest share of visitor spending in the country. The Government of Vanuatu's Post-Disaster Needs Assessment estimates the direct impact of TC Harold on infrastructure and assets of tourism-related businesses to be VT 118,875,000 (0.1 percent of GDP).

154. **The combination of TC Harold and COVID-19 also impacts tourism businesses, despite state support.** In April 2020, 55 percent of tourism businesses surveyed were still operational, with 45 percent having ceased trading. In contrast, by August, only 21 percent of businesses were functional, with 39 percent partially operational, 37 percent dormant, and 3 percent closed indefinitely. Business revenue dropped dramatically, leading to a total of 2,562 employees having lost their job in the industry by August 2020. Impacts were cushioned due to the GoV's Employee Stabilization Program, which provided stabilization payments for employees who continued to be employed and paid.

155. **In addition to the direct impacts on tourism-specific business, other related sectors have been impacted, causing knock-on effects to tourism supply chains and products.** Related industries impacted by the cyclone include agriculture, transport, waste, energy, and health. The cyclone caused extensive damage to the agricultural sector, compromising food availability across the three impacted provinces. Damage to transport assets was minimal, but the local boat fleet suffered significant damage, as did the perimeter fences, fire station, and maintenance workshop of Santo Airport. The cyclone also caused damage to the water, sanitation, and hygiene sector—with fallen trees, flying debris, and flooding damaging communal water systems and rainwater harvesting systems. TC Harold caused severe damage to the electrical grid in Santo, as well as surrounding areas, with

over 11 percent of poles broken or damaged beyond repair. Finally, the cyclone caused damage to 37 health facilities, impacting access to health care during a time when such services will be critical to encourage international travel.

6.3 Challenges and opportunities for the tourism sector

156. **The rebound in global tourism demand remains highly uncertain.** In the early stages of the pandemic, there were some hopes of a V-shaped recovery in global tourism (that is, in the second half of 2020) as infection rates were declining. However, as second waves of COVID-19 infections began to emerge in the fall/winter period in North America, Europe, and other large tourism source markets, forecasts of a potential recovery have been progressively revised down. According to the UNWTO's latest Panel of Tourism Experts Survey (January 2021), more than 50 percent of respondents now expect the tourism recovery to begin in 2022 rather than 2021. Furthermore, even in the face of growing availability of COVID- 19 vaccines throughout 2021, survey respondents still believe a recovery in international tourism to its pre-pandemic (2019) levels would take at least another 2.5 to 4 years.

157. **Vanuatu may see an earlier rebound due to arrangements with proximate markets.** Discussions about establishing a travel bubble between Australia and New Zealand—countries that have been ahead of the curve in getting the pandemic under control—and other 'COVID free' countries in the Pacific have been ongoing since mid-2020. Negotiations have been derailed, however, due to renewed episodes of COVID-19 transmission in some of these countries.[33] Difficulties in agreeing on and implementing the necessary conditions and protocols for border re-opening and health risk management has further delayed progress. With an agreement on a travel bubble, Vanuatu stands to benefit from an influx of pent-up travel demand from fellow bubble countries. The possibility of linking this ANZ–Pacific travel bubble to other bubbles in the Asia region (for example, China–Taiwan–Palau) may also unlock additional sources of demand to help build recovery momentum.

158. **Restoring pre-pandemic visitor levels will be a challenge, however, due to the sector's structural weaknesses.** Vanuatu is likely to face intense competition from other regional destinations who are also keen to rebuild their battered tourism sectors. Prior to the pandemic, Vanuatu's tourism market share among PICs had already been chronically low, relative to key competitors, and its demand capture from core short-haul markets had been eroding. While some of this was due to the shock from TC Pam, it also reflects chronic public underinvestment in enabling infrastructure for tourism and a lack of government prioritization.

[33] Important to note that a quarantine-free pilot with New Caledonia is proposed to start at the end of April 2021. Quarantine-free travel will only commence when both country health authorities determine the rate of COVID-19 transmission and associated public health risk is acceptably low in both countries. Pending the outcome of the pilot with New Caledonia, Vanuatu will consider expanding the bubble to New Zealand and/or Fiji, and a state-by-state approach to re-opening with Australia.

159. **The composition of tourism demand for Vanuatu in the medium term is likely to differ from its pre-COVID-19 configuration.** First, tourists with the intention of sun-and-sand tourism might be inclined to choose domestic alternatives rather than endure the hassle of international air travel and associated health and immigration protocols. This may tilt Vanuatu's visitor base towards those pursuing unique cultural, nature, and adventure experiences that cannot easily be found in their home countries. Second, recovery in cruise ship tourism is likely to be slow due to heightened traveler hesitancy to be in enclosed quarters with thousands of passengers.

160. **The changing demand landscape presents an opportunity for Vanuatu to re-orient to a higher value-added and more resilient tourism model.** Three key features would characterize such a model. First, quality over quantity of tourists. For a small island nation such as Vanuatu with predominantly natural and cultural tourism assets, a low-volume, high-value tourism model becomes an appealing and sustainable proposition. Having a more niche visitor market base, centered on culture/nature and adventure-seeking travelers, would make Vanuatu's tourism sector more resilient to potential future declines in mainstream tourism demand. Second, creating greater market diversification by tapping new visitor segments within existing source markets and unlocking new source markets in the Asia-Pacific region. Third, increased visitor dispersion across Vanuatu's islands; broadening tourism activity to other high-potential islands (for example, Malekula, Pentecost, Ambrym) would help not only to distribute the economic benefits of tourism more evenly, but also minimize the social, environmental, and infrastructure pressures placed on any one given destination. It would also help in diversifying the risk from natural disasters.

6.4 Policy implications

161. **To facilitate a transition to a more sustainable and disaster-resilient tourism model, an integrated set of public interventions is needed.** In broad terms, these can be separated into five key areas: first, climate-resilient capital investments in tourism-enabling infrastructure; second, measures to enhance emergency preparedness; third, social protection mechanisms for tourism workers; fourth, improvements in the business climate; and fifth, re-focused marketing strategies and improvements in quality standards to diversify the tourism market.[34]

[34] Important to note that a quarantine-free pilot with New Caledonia is proposed to start at the end of April 2021. Quarantine-free travel will only commence when both country health authorities determine the rate of COVID-19 transmission and associated public health risk is acceptably low in both countries. Pending the outcome of the pilot with New Caledonia, Vanuatu will consider expanding the bubble to New Zealand and/or Fiji, and a state-by-state approach to re-opening with Australia.

162. **Climate-resilient infrastructure investments are needed to improve existing tourism assets and develop new assets.** To support the tourism sector the government identified a set of high-priority investments (see Annex 5 for the list of priority projects), based on four strategic criteria.[35] Disaster risk, however, was not included as a decision criterion. Given the country's high exposure to natural disasters, climate-resilient investment projects should arguably receive increased attention.[36] Relatedly, there is a need to develop a multi-year, climate-resilient tourism infrastructure investment plan, including investment planning for cyclone proofing infrastructure and climate adaptation. Finally, the development of new adventure tourism assets and infrastructure and nature-based ecotourism services could help protect biodiversity, promote sustainability, and boost livelihoods.

163. **Vanuatu needs to invest in emergency preparedness to enable long-term sustainable growth of the tourism sector.** In order to improve emergency preparedness, Vanuatu must move from a reactive to a more proactive approach. Existing emergency management systems and contingency planning led by the National Disaster Management Office need to be fully integrated with tourism, health, and other ministries. Additional actions to ensure emergency preparedness include the upgrading of current emergency preparedness and response (ERP) equipment and facilities at tourism hubs, a diagnostic to further strengthen ERP practices in the tourism sector, and the development of multi-hazard early warning and communications systems for tourism operators and visitors.

164. **A disaster-responsive tourism worker training facility may be considered.** Vanuatu is currently lacking specific mechanisms to protect tourism workers in the event of loss of employment or income due to a (climatic) shock. One possibility is a tourism worker training facility that is activated during a major disruption such as a natural disaster or health pandemic. Workers would be enrolled in training and receive a stipend during the period in which they are furloughed or unemployed. Such a model has been successfully rolled out in countries such as Singapore during the COVID-19 crisis. In addition to providing some basic income for affected workers, such a scheme has the benefit of upskilling the workers and boosting their productivity for when their services are again needed in the post-crisis period. As such, it represents an implicit subsidy to employers to in-house training costs they would otherwise have incurred or been unable to afford themselves.

[35] The criteria included: (i) the investment's relevance to attracting demand from high-priority visitor segments; (ii) role in mobilizing private investment in particular types of accommodation in a specific destination; (iii) the importance of the investment for incentivizing the private sector to develop tourism products tailored to high-growth visitor segments in a given destination; and (iv) the broader potential socio-economic benefits of the investment for local communities and non-tourism sectors.

[36] For instance, two key tourism corridor roads in Tanna are currently unpaved, but at risk of climate-related damage. Therefore, climate-smart road paving is needed as a natural disaster could cut off connectivity to critical tourism sites in Tanna.

165. **Beyond public investment, improvements in Vanuatu's business climate are needed to attract private investment.** The survey of tourism investors in Vanuatu revealed ongoing challenges to investors in doing business in Vanuatu and low levels of satisfaction in relation to their investment returns. Some of top investor constraints include: difficulties related to securing and developing land; the lack of predictability and transparency in investment approvals and permits; access to suitable skilled labor (both foreign and local); and uncertainty regarding taxation policy (ADB, 2019). With the global investment cycle in the tourism/hospitality industry now virtually stalled due to the spare capacity created by COVID-19, risk appetite is likely to be low for the foreseeable future and investors inclined to favor more established tourism.

166. **Improved marketing efforts and the preservation of natural and cultural assets are critical to attract higher-spending visitors.** The two top markets to Vanuatu—Australia and New Zealand—still present a lot of growth potential. Currently, New Zealand has a high awareness of Vanuatu as a destination but views it as a sand-and-sea destination only. Targeted marketing should develop strong itineraries under niche markets and educate travel trade on unique offerings. Meanwhile, Australians tend to have a lower awareness of Vanuatu as a destination, suggesting a scale-up of general awareness building marketing activities will be needed. To attract high-spending visitors and sustain demand from its key source markets, it is important to preserve the country's natural and cultural assets.

167. **Efforts are needed to develop Vanuatu's adventure travel market**. This market will be one of the first to rebound, and includes tourists who are willing to travel to less-developed destinations and also to more remote and exotic destinations within countries. Building this market will therefore support a greater geographic spread of tourism benefits across Vanuatu's outer islands. Current barriers to targeting this market include a lack of safety standards and insurance guidelines for adventure products, limited relationships with specialized adventure travel agents, and a perception of Vanuatu as a relaxing beach destination. Addressing these constraints will therefore involve building relationships with adventure specialists and working with industry to develop engaging adventure products under national safety standards.

7. Fiscal trends and prospects

168. **This section provides an overview of recent fiscal trends and prospects.** Section 7.1 describes the overall fiscal context, the evolution of public debt and key elements of the budgeting process. Section 7.2 analyzes trends in revenue, highlighting the recent reliance on non-conventional revenue raising schemes. Expenditure trends are analyzed in Section 7.3, while Section 7.4 concludes with fiscal prospects and challenges.

7.1 Overall fiscal context

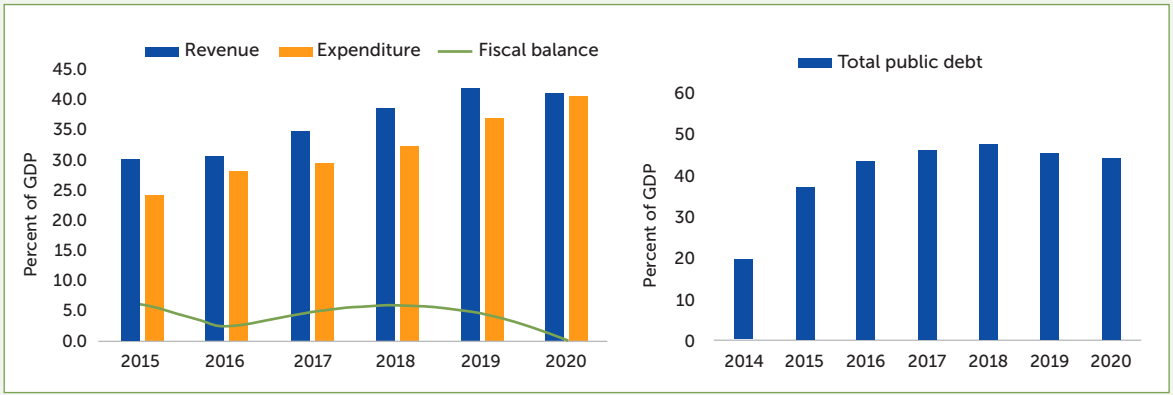
169. **Until recently, Vanuatu's conservative fiscal stance resulted in deficiencies in public service delivery and infrastructure.** Until the middle of the previous decade, the fiscal target of keeping the recurrent budget in surplus meant that low tax revenues translated to low overall revenues and correspondingly low public expenditures. During the period 2005–14, total revenue averaged 23 percent of GDP, while total expenditures averaged 23.8 percent of GDP. This fiscal strategy resulted in deficiencies in public service delivery and infrastructure. For instance, in the education sector the pupil–teacher ratio at the primary level was estimated at 24 in 2007, well above the OECD benchmark of 16 students per teacher. In the infrastructure sector, only 5 percent of the national public road network was paved in 2014, with paved roads mostly restricted to the islands of Efate and Santo.

170. **Since TC Pam, however, fiscal policy has been marked by an increase in public spending (see Figure 7-1).** Recognizing the need to improve the nation's infrastructure stock and supported by increased revenue, the government implemented several donor-funded infrastructure projects, including the construction of international wharves, new roads, inter-island shipping facilities, and upgrades to the international airport. At the same time, the damages and losses caused by TC Pam, TC Harold, and COVID- 19 triggered additional needs for economic support, reconstruction, and rehabilitation projects targeting schools, roads, and other public service facilities. Over the period 2015–20, total expenditures averaged 32.1 percent of GDP, almost 8 percentage points higher compared to the period 2010–14.

171. **In recent years, low tax collection has been offset by an increase in non-conventional revenue raising schemes.** With no corporate or personal income tax, value-added tax (VAT) is the largest source of tax revenue. As a result, the tax revenue-to-GDP ratio only reached 18 percent of GDP in 2020, significantly lower than the PIC average of 24 percent. Despite limited tax collection, Vanuatu's public revenues have increased significantly in the past five years (see Figure 7-1), in large part driven by the rapid expansion of its Economic Citizenship Program (ECP), a passport selling scheme. Total revenues averaged 36.3 percent of GDP during the period 2015–20, up from an average of 22.7 percent of GDP during the period 2010–14.

172. **Infrastructure and reconstruction needs were financed with external loans, leading to a rise in public debt.** Higher-than-expected revenue from the ECP combined with lower-than-expected capital spending resulted in fiscal surpluses in recent years (see Figure 7-1, Panel A). Concurrently, concessional external loans were used to finance infrastructure and reconstruction needs. As a result, and even though the country has been running fiscal surpluses,[37] the stock of total public debt increased from 20 percent of GDP in 2014 to 44 percent of GDP in 2020 (see Figure 7-1, Panel B). Public debt peaked in 2018 at 48 percent of GDP but has declined relative to GDP since. Around 80 percent of public debt consists of highly concessional external borrowing, with around half of the total from bilateral partners (mainly China and Japan) and a third from multilaterals (mainly the ADB and WB). Vanuatu's external public and publicly-guaranteed debt is generally long-term—20 to 40-year maturities—and relatively concessional, with interest rates ranging between 0 and 2 percent.

Figure 7-1: Fiscal aggregates and public debt



Source: IMF, MFEM.

173. **The government has taken steps to build prudent debt management capacity.** The authorities have adopted Vanuatu's Debt Management Strategy 2019–22 (DMS), which sets overall ceilings for the level of external (40 percent of GDP) and total public debt (60 percent of GDP). In addition, DMS imposes a requirement to only contract external loans which are highly concessional (minimum a 35 percent grant component and a 10-year grace period) and support projects with a minimum positive economic return sufficient to cover the interest and repayment costs. A recently approved revision to the PFEM Act has strengthened the implementation of the provisions in the Debt Management Strategy, including those around the concessionality of new borrowing.

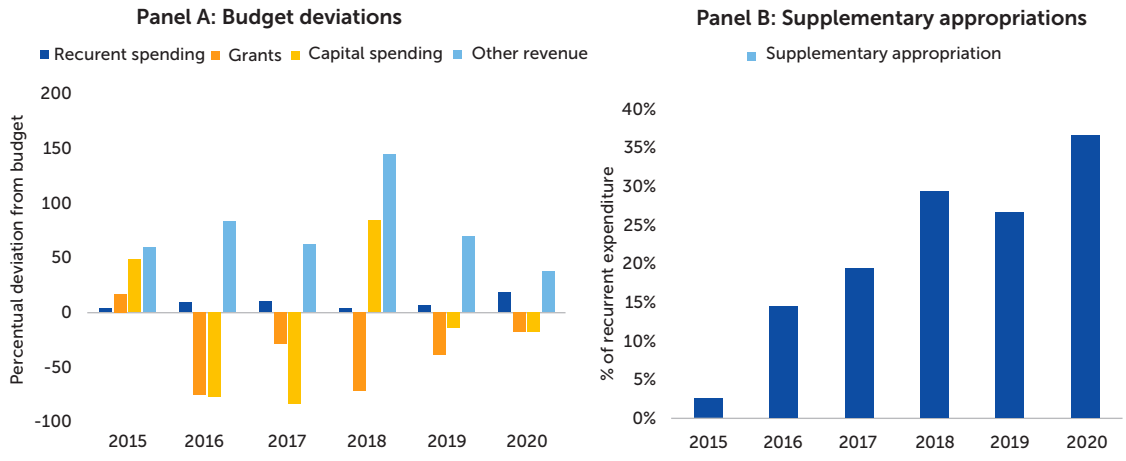
174. **Budget ceilings for line ministries appear to be set with the overriding priority of maintaining an operating surplus, but often do not fully reflect the cost of delivering existing policies.** As a result, within-year virements of funds within agencies

[37] The budget surpluses have allowed Vanuatu to clear domestic arrears, build cash buffers and pay off some of its external debts in advance. Between 2018 and 2020, for example, over VT 4 billion (around 4 percent of GDP) in advance payments were made on external loans, reducing both outstanding principal and interest expenditure.

are required, which divert core operational funds from their intended use. Agencies tend to overspend on payroll budgets and do not properly account for severances, retirement, and other non-salary costs of permanent employees. Recurrent spending on goods and services and (non-staffing) operational budgets therefore have to be cut during the course of the budget year, adversely impacting service delivery and the maintenance of public assets. Furthermore, the focus on fiscal control comes at the expense of sound project appraisal and cost-effectiveness analysis. New project proposals are often bids to meet cost pressures or fill gaps in baseline funding needs rather than proposals to improve the provision of public services.

175. **Consistent deviations in both expenditures and revenues suggest difficulties with budget planning and execution.** Regarding expenditures, the analysis of deviations between budgeted and actual expenditures reveals that deviations are particularly large for capital projects (see Figure 7-2, Panel A). Although relatively small in size, recurrent spending has consistently recorded an overspend, on average 9.2 percent of budgeted government recurrent expenditure during the period 2015–20. Regarding revenues, proceeds from the ECP consistently surpassed expectations as outturns exceeded budgeted estimates, in 2018 even by a staggering 147 percent. Generally, deviations in grant revenue are well correlated with deviations in capital spending, as a large proportion of the capital program is funded by donors. The size of the supplementary budget has grown rapidly, both in nominal value, as well as a share of the original recurrent expenditure (Figure 7-2, Panel B). This reduces the credibility of the annual budget. Some of the deviations may be explained by unexpected shocks, such as natural disasters or the COVID-19 pandemic. For example, the fiscal expansion following the dual shock of COVID-19 and TC Harold necessitated large supplementary appropriations. However, lack of absorptive capacity to implement large scale infrastructure projects and poor expenditure planning contributed to budget execution deviations.

Figure 7-2: Accuracy of the budget

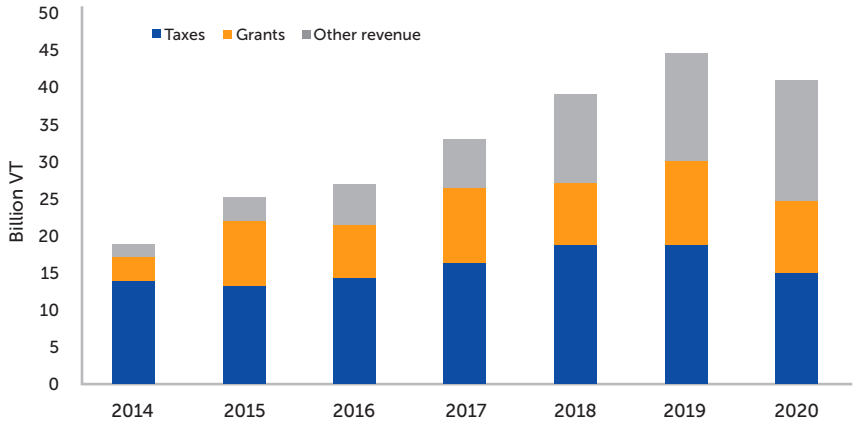


Source: MFEM.

7.2 Revenue trends

176. **The dual shock of TC Harold and COVID-19 put a halt on the rise in total revenue.** Total revenue more than doubled in the period 2014–19, from VT 18.6 billion (23.5 percent of GDP) in 2014 to VT 44.8 billion (41.2 percent of GDP) in 2019. The rapid expansion of Vanuatu's Economic Citizenship Program has been mainly responsible for the rise in total revenue (see Figure 7-3). In 2020, however, total revenues dropped by 8.3 percent compared to 2019 outturns. COVID-19 and TC Harold negatively affected VAT collections in 2020 (21 percent year-on-year decline) due to lower aggregate demand, including reduced domestic consumption and the shutdown of the tourism industry. The second largest tax source, export and import duties, also recorded a 14 percent year-on-year decline. Other revenue—of which the ECP is the main component—showed strong resilience against the dual shock of COVID-19 and TC Harold and grew 9 percent (year-on-year) in 2020.

Figure 7-3: Total revenue

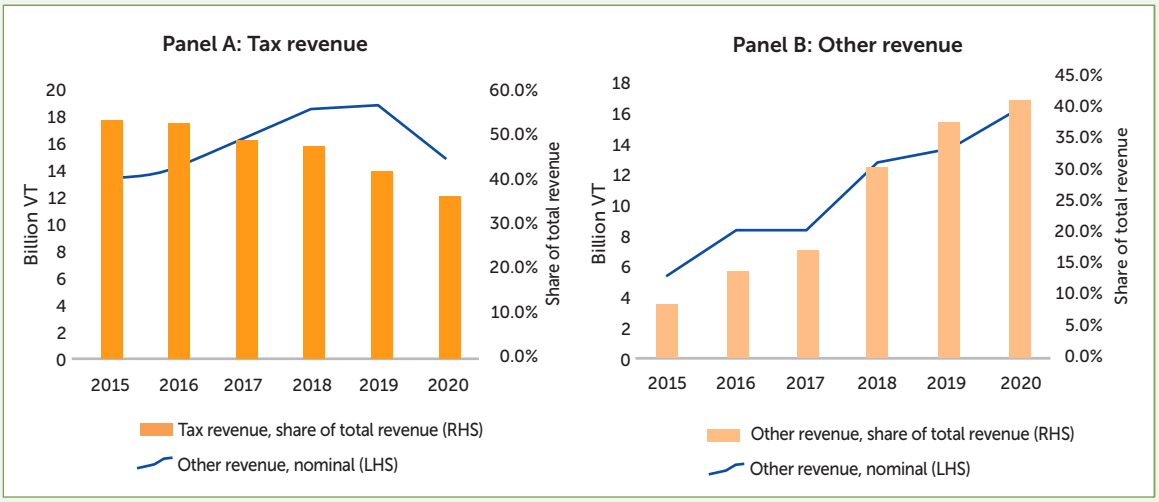


Source: MFEM.

177. **The share of tax revenue, generally the largest part of total revenue, has declined in recent years.** In 2015, the share of tax revenue in total revenue stood at 54 percent. In 2020, however, the share of tax revenue declined to 36 percent, due a large increase in ECP receipts (see Figure 7-4). With no corporate or income tax, VAT is the largest contributor to tax revenue, averaging 77 percent of tax revenue in the period 2015–20. Export and import duties are the second largest source of tax revenue, averaging 21 percent of tax revenue in the period 2015–20. Recent changes to the Tax Administration Act, placing greater emphasis on compliance and collection, as well as an increase in the VAT rate from 12.5 percent to 15 percent, have led to a steady growth in tax revenue, from VT 13.5 billion in 2015 to VT 18.9

billion in 2019 (or 17.6 percent of GDP). However, in 2020 tax revenue dropped to VT 14.9 billion due to the impacts of COVID-19 and TC Harold (see Figure 7-4, Panel A).

Figure 7-4: Tax revenue and other revenue (ECP)

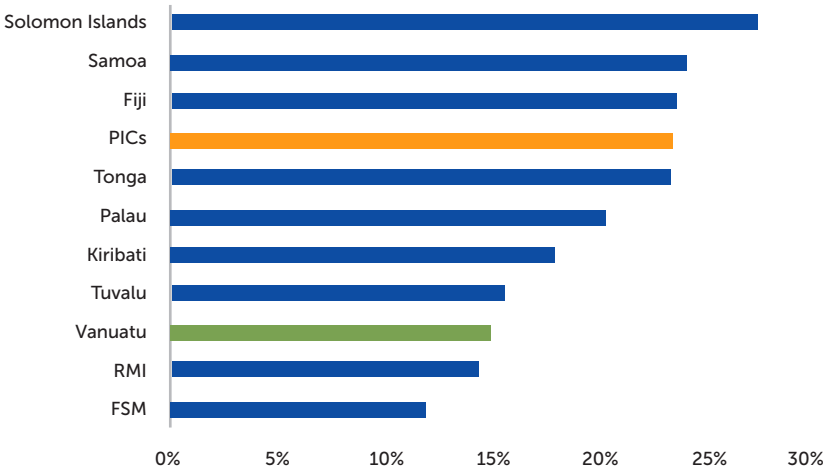


Source: MFEM.

178. **The lack of corporate and personal income tax explains Vanuatu's weak tax effort and increasing reliance on non-conventional revenue schemes such as the ECP.** With a tax revenue-to-GDP ratio of 15 percent in 2020, Vanuatu trails most other PICs in tax revenue (see Figure 75). To improve tax collection, broaden the tax base, and remove inefficient charges and duties, the government carried out a comprehensive revenue review in 2017. The report proposed to introduce an income tax for individuals and companies. The introduction of such taxes has a potential to generate 2.5 percent

of GDP a year in revenue. Furthermore, a progressive income tax can be designed to skew away from low income earners and low profit margin firms. However, these changes have not been initiated and without them the reliance on VAT increases the relative tax burden on the poor. Furthermore, a relative low tax collection increases the dependence on non-conventional revenue-raising schemes—such as the ECP—to supplement tax revenues.

Figure 7-5: PICs tax collection (percent of GDP)



Source: MFEM.

179. **In recent years, the rapid expansion of Vanuatu's Economic Citizenship Program has been responsible for the rise in public revenue.** Launched in the aftermath of TC Pam to boost revenue, the Vanuatu Development Support Program (VDSP) and the Vanuatu Contribution Program (VCP) have been significant sources of windfall income for the country (see Box 7.1). While tax revenue recorded an 11 percent growth between 2015 and 2020, other revenues—of which ECP is the main component—quadrupled during the same period. Since 2018, revenue from the ECP overtook the VAT as the largest single revenue line and in 2020 ECP receipts even surpassed total tax revenue (see Figure 7-4), reaching 16 percent of GDP. Since its inception, proceeds from the ECP consistently surpassed expectations as outturns exceeded budgeted estimates (see Figure 7-2).

Box 7.1: Vanuatu's Economic Citizenship Programs

Vanuatu has established numerous Economic Citizenship Programs over the last few years. The most recent programs, the Vanuatu Development Support Program (VDSP) and the Vanuatu Contribution Program (VCP) have been more successful than their predecessors, including the Vanuatu Economic Rehabilitation Program (VERP) which was phased out in March 2017. The existing programs allow eligible applicants to purchase Vanuatu citizenship (no voting rights and political activity) in return for payment.

Several factors make Vanuatu citizenship appealing for foreigners. First, there is no residency requirement for people who acquire citizenship. An eligible person can get the passport within 1–2 months, making the process the fastest in the world. There is no travel requirement to Vanuatu for the applicant neither before, nor after the issuance of the passport. The fee, which was reduced twice since the inception of scheme, stands at US$130,000. This is one of the lowest fees globally among comparable citizenship schemes. Furthermore, the cost of including an additional family member in the application is low. Third, the passport allows visa-free travel to over 130 countries across the world, including the European Union. Lastly, the lack of a tax on global income, inheritance, and capital gains in Vanuatu adds appeal to its citizenship.

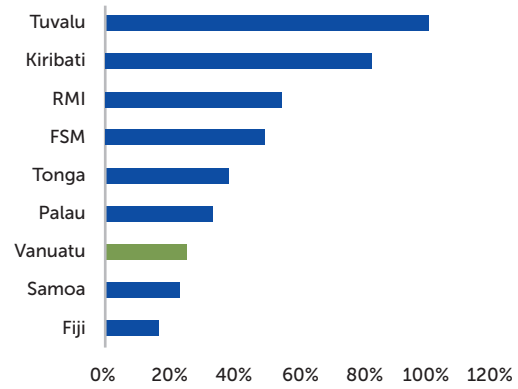
As a result, since its introduction, VDSP and VCP have seen soaring demand and been one of the important sources of revenue for Vanuatu. It is estimated that more than 5,000 people have been handed Vanuatu passports (approximately 1.5 percent of the population) through these programs, generating over US$350 million since 2017. By 2018, ECP revenue overtook VAT receipts, becoming the largest source of domestic revenue.

While it has been a vital source of revenue for Vanuatu, existing programs have caused some controversy. Critics have raised concerns related to application screening process. Furthermore, there are concerns around the sustainability of revenue from this scheme. Finally, there is mounting domestic and international political opposition to the program, suggesting that revenue from ECP is vulnerable to changes in political landscape.

7.3 Expenditure trends

180. **Despite an upward trajectory in recent years, public spending remains one of the lowest in the region**. A relatively weak revenue-generating capacity in the presence of fiscal targets acts as a constraint on spending decisions. As a result, recurrent expenditure has been low compared to most of the other PICs (see Figure 7-6). However, large infrastructure investment projects, recovery and reconstruction work following natural disasters, and increased revenues have created an impetus for a rise in spending in recent years. In 2020, the Economic Stimulus Package following the COVID-19 pandemic and TC Harold triggered additional expenditures (see Box 7.2), resulting in the largest public spending on record (VT 40.6 billion or 40.8 percent of GDP).

Figure 7-6: PICs recurrent expenditure (percent of GDP)



Source: IMF.

181. **Recurrent expenditure grew from 22.9 percent of GDP in 2015 to 34.0 percent of GDP in 2020, driven by disaster response and a rise in the public sector wage bill.** During the period 2015–17, the public sector wage bill accounted for 43 percent of recurrent expenditure. However, in 2018 the Government Renumeration Tribunal increased the compensation of employees by 25 percent to bring it in line with the cost of living and to attract and retain talent in the public sector.[38] As a result, wages and compensation accounted for 47.3 percent of recurrent expenditures over the period 2018–20.[39] Spending on goods and services has remained fairly stable and comprised nearly a third of recurrent expenditures. Other expenses, including subsidies, grants, and social payments, have depicted an upward trajectory over recent years (see Figure 7-7, Panel A). In 2020, extra spending related to the rollover

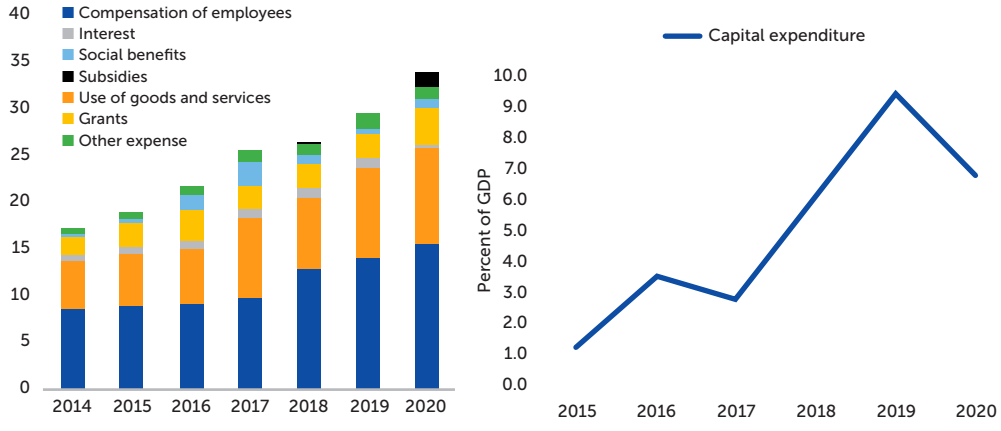
[38] The wage increase was also used as an opportunity to rationalize several public servant allowances (e.g. for housing), which have now been built into the new salary scales. The wage increase thus resulted in a partially offsetting decline in spending on social benefits.

[39] On average, Vanuatu dedicated around 12 percent of GDP to public sector wages over the period 2017–19. Only two PICs—Fiji (9 percent of GDP) and Samoa (9 percent of GDP)—spend less on personnel than Vanuatu.

of unspent funds, and supplementary appropriations related to COVID-19 and TC Harold resulted in a sharp spike across almost all categories, particularly in subsidies, grants, and social benefits. Subsidies reached 1.5 percent of GDP in 2020 to pay for the Employment Stabilization Payments, school fee subsidy, and inter-island shipping subsidy among others.

182. **Managing payroll expenditure has been challenging for Vanuatu.** In general, human resource planning is lacking in the country. Educational and training programs are generally not well-targeted at filling public administration labor demand. This leads to a large number of unfilled professional positions across the administration. In other instances, limited effectiveness in payroll control leads to large unbudgeted expenditures across various portfolios. Furthermore, the large share of payroll in sectoral allocations crowds-out operational expenditure. For example, an increase in hospital payroll in the health sector has squeezed operational expenses from 26 percent of total expenditures to 19 percent of total expenditures between 2016 and 2019. Similarly, due to a limited operational budget, the education sector faces a deficit in teaching supplies, including textbooks. Better planning of payroll expenditure could help free up resources that can be allocated towards operational expenditure.

Figure 7-7: Trends in public expenditure



Source: MFEM.

183. **Despite concerns regarding the country's absorptive capacity, capital expenditures have risen in recent years.** In 2015, the GoV adopted the Vanuatu Infrastructure and Strategic Investment Plan 2015–24, an ambitious strategy to boost economic growth by prioritizing a set of strategic investments, including the Port Vila Urban Development Project, the Luganville International Wharf, and the Vanuatu Aviation Investment Project. Furthermore, TC Pam and TC Harold destroyed a large share of the country's capital stock, triggering further investment needs. As a result, the acquisition of non-financial assets increased from 1.3 percent of GDP in 2015 to 6.8 percent in 2020 (see Figure 7-7, Panel B). While capital spending has increased in recent years, it is important to note that it has been largely underspend due to delays in project implementation and limited institutional capacity to manage a large infrastructure pipeline.

184. **A large proportion of recurrent spending is funded by the government, while capital spending is largely funded by donors.** The share of grants in total recurrent expenditure averaged 11 percent over the period 2015–20. On the other hand, the share of external loans from development partners in total infrastructure spending has varied between 60 percent and 80 percent of total capital spending over recent years. It is worth noting that allocated funds were much higher than actual spending. In other words, the share of donor spending in total capital expenditure would have been higher if budgeted commitments were actually disbursed.

Box 7.2: The economic stimulus package

Vanuatu has responded to the compound disasters of TC Harold and Covid-19 with several policy measures. On 27 March 2020, the Vanuatu National Provident Fund announced that members who had lost their jobs due to the pandemic, could access up to VT 100,000 in interest-free loans. The total payout under this scheme was VT 1.5 billion.

On 8 April 2020, the government adopted a fiscal stimulus package of a combined size of VT 4 billion (nearly 4 percent of GDP) which included the following components:

- Deferred and cancelled taxes, license fees, and charges (most notably, Road Tax, Rent Tax, Residence Permit fees, and Business License fees) for businesses in 2020. Some measures were backdated to start of 2020. **(VT 796 million)**
- Employment Stabilization Payment. Reimbursing employers VT 30,000 per employee per month for four months, plus an additional 12 percent to the employer. **(VT 2.5 billion)**
- Small and Medium Enterprises grant. Allocating grant equal to the value of the fees of a full year business license. **(VT 400 million)**
- Agricultural subsidies. Providing producers of copra, kava, cocoa, and coffee with a Commodity Support Grant. **(VT 300 million)**
- Inter-island Shipping Subsidy. Facilitating farmers' access to major market centers such as Port Vila and Luganville. **(VT 100 million)**
- Secondary school tuition fee exemption. Suspending tuition fees for 2020 by directly paying schools VT 42,000 per student. **(VT 510 million)**

7.4 Fiscal prospects and challenges

185. **The country is projected to run moderate fiscal deficits in the coming years**. According to the latest projections, deficits are expected for the period 2021–24, averaging 3.8 percent of GDP (see Table 7-1). The projected decline in ECP receipts is expected to outweigh the gradual increase in tax revenue, resulting in an overall decline of total revenue. While forecasting ECP revenues is subject to considerable uncertainty, it is expected that ECP receipts will decline from 8.5 percent of GDP in 2021 to 5.6 percent in 2024. Taxes—VAT, other taxes on goods and services and trade taxes—are expected to improve in line with economic recovery,[40] from 16.1 percent of GDP in 2021 to 17.3 percent in 2024, while development grants are

[40] While discussions have been ongoing to introduce corporate and personal income tax, the Government of Vanuatu has decided to defer any decisions on the issue. In their latest Budget Strategy, the GoV did consider raising soft drinks and tobacco taxes.

expected to return to historical averages. As a result, total revenues are projected to decline from 40.6 percent of GDP in 2021 to 31.6 percent in 2024, averaging 34.6 percent over the period 2021–24. Expenditures are expected to gradually decline, reflecting a phasing out of TC Harold reconstruction efforts and COVID-19 recovery support. Total expenditures are projected to decline from 44 percent of GDP in 2021 to 35.4 percent in 2024, averaging 38.5 percent over the period 2021–24. Capital expenditures—largely financed by development partner loans—and payroll are expected to remain broadly constant over the projection period, with an average over the period 2021–24 of 7.6 percent and 14.8 percent of GDP respectively. However, government subsidies, grants, and other expenses (including aid in kind) are projected to decrease in 2022, reflecting subsiding TC Harold reconstruction and COVID-19 recovery efforts.

Table 7-1: Selected fiscal indicators

	2021	2022	2023	2024
	Percent of GDP			
Revenue	40.6	34.2	32.1	31.6
Domestic revenue	27.4	26.2	25.7	25.4
Taxes	16.1	16.5	17.0	17.3
Taxes on goods and services	12.2	12.5	12.9	13.1
Taxes on international trade	3.8	3.6	3.4	3.4
Other revenue	11.2	9.7	8.7	8.1
of which: Economic Citizenship Program	8.5	7.0	6.0	5.6
External grants	13.2	8.9	6.4	6.2
Expenditure	44.0	38.3	36.1	35.4
Recurent expenditure	36.4	29.6	29	28.5
Compensation of employees	15.4	15	14.5	14.3
Use of goods and sewrvices	9.2	8.7	8.7	8.6
Interest payments	0.9	0.9	0.8	0.8
Subsidies	1.5	0.1	0.1	0.1
Grants	3.3	2.4	2.4	2.4
Social benefits	0.8	0.8	0.8	0.8
Other expense	5.3	1.7	1.7	1.7
Net acquisition of nonfinancial assets	7.6	8.7	7.1	6.9
Net lending/borrowing (overall balance)	-3.5	-4.1	-4.0	-3.7
Net operation balance	4.2	4.6	3.1	3.1
Primary balance (incl grants)	-2.6	-3.2	-3.2	-2.9
PPG public debt	47.5	50.2	51.4	53.2
Domestic	8	6.7	5.7	5.3
External	39.4	43.5	45.8	47.9

Source: IMF.

186. **There are a number of downside risks to the fiscal position, which require attention.** First, ECP revenues were used as the main source to finance growing expenditures in recent years. However, overreliance on an unpredictable income stream of revenue may lead to unsustainable spending, eventually putting pressure on the fiscal position over the coming years. Given this risk, the government needs to ensure that the currently high levels of ECP revenues are not used as the basis to lock in higher levels of current spending. It would likely be more prudent to treat ECP revenues as resource revenues, which would imply that a much higher proportion of these revenues are saved and/or invested, rather than used to meet current spending needs. Relatedly, the government may consider introducing an income tax for individuals and companies to broaden the tax base, compensate for future declines in ECP revenues and provide an additional source of revenue to cope with disaster shocks. Third, given the country's limited institutional capacity and weak track record in capital spending accuracy, it remains to be seen whether it manages to efficiently implement the investment and recovery program. Fourth, there is a need to prioritize climate-resilient infrastructure rebuilding given Vanuatu's exposure to climate change risks, as well as to better account for infrastructure maintenance costs in its budget forecasts. Fifth, given Vanuatu's vulnerability to natural disasters, having adequate fiscal buffers remains crucial. Finally, fiscal risks related to state-owned enterprises—especially Air Vanuatu—have increased with the COVID-19 pandemic, which requires increased fiscal risk management.

8. Public Financial Management

187. **This section provides a succinct overview of the country's PFM framework, with a specific focus on disaster resilience.** Section 8.1 briefly discusses core PFM elements, including credibility of the budget, fiscal risk, expenditure control, debt management, procurement, and information systems. Section 8.2 describes Vanuatu's disaster risk management framework, including disaster financing. Finally, section 8.3 offers a number of ideas to make the country's PFM practices more disaster-resilient.

8.1 Public Financial Management in Vanuatu

188. **Over the years, Vanuatu has made progress in PFM performance, but significant weaknesses remain.** The Public Financial and Economic Management (PFEM) Act of 1998 governs the country's public financial management. Core PFM elements—policies, regulations, and procedures—have been established, but significant weaknesses remain. The 2015 PEFA assessment noted that progress has been made in revenue forecasting, transparency of budget documentation, internal control, revenue administration, and the legal framework for customs and procurement. The assessment, however, found gaps in multi-year fiscal planning, debt management, competitive procurement, commitment control, and auditing (see Table 8-1). To address the weaknesses identified in the PEFA assessment, the Government of Vanuatu developed the PFM Roadmap 2017–21, setting out key priority areas for PFM reform.

189. **At the aggregate level, actual primary expenditure has not deviated significantly from the original budget levels.** While certain ministries—such as health and the Prime Minister's Office—have exceeded their authorized spending limits, aggregate budget deviations are fairly limited. Notwithstanding this, some ministries and constitutional bodies have required significant supplementary appropriations (for example, health and education) while other ministries have under-spent their allocations. The Minister of Finance will then lay before the Parliament a statement showing the particulars of any expenditure made under the standing appropriation.

190. **Basic procedures for the scrutiny of government expenditures exist, but implementation arrangements can be improved.** Government expenditures are scrutinized by the Public Accounts Committee (PAC) in parliament. The Auditor General's office has the responsibility to conduct internal audits of departments. For general loans and grants made directly to the Government of Vanuatu, the Public Accounts Committee has the responsibility to conduct audits. It has only been since 2020 that the PAC has finally commenced meeting to perform its role in scrutinizing government expenditures after many years of inactivity. Its ability to oversee the financial management and accountability of public funds remains a concern, as many state enterprises and statutory bodies have not submitted accounts for several years.

191. **Limited effectiveness in payroll control has raised expenditures levels.** PFM arrangements remain weak over the effectiveness of payroll control. Limited scope of external audits and weak responses by line ministries to audit recommendations resulted in increased payroll costs and unbudgeted expenditures. Furthermore, weaknesses and non-compliance with systems has led to less-than-optimal strategic resource allocations and inefficiencies in service delivery.

192. **A government Procurement Act was passed but putting procurement legislation into practice has been challenging.** Procurement regulations and policies are documented in the Government Contracts and Tenders Act of 2019 and Regulations CAP 245. These documents are complemented with the 2005 Guidelines for the Procurement of Goods and Services. There is a comprehensive suite of standard bidding documents across Ministries, which are available publicly on the Government Finance and Treasury website. A Central Tenders Board has oversight of procurements valued above $A 50,000 and operates well albeit under-resourced. Most departments do not have dedicated procurement staff and purchasing is undertaken by non-specialist staff alongside their other duties. Even where there are staff assigned specifically to procurement duties, they are lacking in knowledge of, and experience in the subject. Finally, documentation to operationalize procurement legislation is lacking.

Table 8-1: PEFA assessment (2015)

Assessment areas	Specific indicators	Grade 2012	Grade 2015
A. PFM OUT-TURNS: Credibility of the budget	PI-1 Aggregate expenditure out-turn compared to original approved budget	A	A
	PI-2 Composition of expenditure out-turn compared to original approved budget	A	B+
	PI-3 Aggregate revenue out-turn compared to original approved budget	A	B
	PI-4 Stock and monitoring of expenditure payment arrears	A	D
B. KEY CROSS-CUTTING ISSUES: Comprehensiveness and transparency	PI-5 Classificationof the budget	B	C
	PI-6 Comprehensiveness of information included in budget documentation	B	A
	PI-7 Extent of unreported government operations	B+	A
	PI-8 Transparency of inter-governmental fiscal relations	B	B
	PI-9 Oversight of aggregate fiscal risk from other public sector entities	D	D+
	PI-10 Public access to key fiscal information	C	C
C. BUDGET CYCLE			
C (i) Policy-based budgeting	PI-11 Orderliness and participation in the annual budget process	A	B
	PI-12 Multi-year perspective in fiscal planning, expenditure policy and budgeting	C+	D+
C (ii) Predictability and control in budget execution	PI-13 Transparency of taxpayer obligations and liabilities	B	B
	PI-14 Effectiveness of measures for taxpayer registration and tax assessment	B	B
	PI-15 Effectiveness in collection of tax payments	D+	D+
	PI-16 Predictability in the availability of funds for commitment of expenditures	B+	C+
	PI-17 Recording and management of cash balances, debt and guarantees	C+	C+
	PI-18 Effectiveness of payroll controls	C+	D+
	PI-19 Competition, value for money and controls in procurement	D	D+
	PI-20 Effectiveness of internal controls for non-salary expenditure	C	C+
	PI-21 Effectiveness of internal audit	D+	C+
C (iii) Accounting, recording and reporting	PI-22 Timeliness and regularity of accounts reconciliation	B	B
	PI-23 Availability of information on resources received by service delivery units	D	C
	PI-24 Quality and timeliness on in-year budget reports	B+	C+
	PI-25 Quality and timeliness of annual financial statements	B+	D+
C (iV) External scrutiny and audit	PI-26 Scope, nature and follow-up of external audit	D	D+
	PI-27 Legislative scrutiny of the annual budget law	C+	D+
	PI-28 Legislative scrutiny of external audit reports	D+	D+

Source: EU (2015).

193. **A debt management strategy (DMS) guides the government's borrowing practices.** The government has developed a DMS for the years 2019–22, which was approved by the Council of Ministers in September 2019. The DMS is in line with the principles of transparent and accountable fiscal management specified in the Public Finance and Economic Management Act (PFEM) Act of 1998 and associated amendments. Under this strategy, the government's borrowing requirements and payment obligations should be met at the lowest cost with a prudent degree of risk. Given Vanuatu's vulnerability to and risk of natural disasters, the government places importance on internalizing the risks to growth associated with natural disasters and boosting the country's readiness to respond. The government embarked on instituting ex-ante measures that require different layers of preparedness including strengthening risk assessment and planning, building domestic fiscal buffers, ensuring external buffers, and building and maintaining resilient infrastructure.

194. **The government's ability to oversee fiscal risk remains a significant concern.** The Government of Vanuatu still maintains its holding in a large number of government business enterprises (GBE), including nine corporatized SOEs (such as Air Vanuatu), two non-corporatized SOEs, five regulatory bodies, one mutual financial institution (the Vanuatu Provident Fund), one statutory body, and minority holdings in four enterprises. While the timeliness of the financial statements of several GBEs has improved, the Auditor General notes that basic bookkeeping and accounting skills are still lacking in a number of public entities. As such, the GoV is unable to have a complete and up-to-date picture of its exposure to contingent liabilities. Legislation to force GBEs to provide the Ministry of Finance and Economic Management with relevant data is outstanding. Furthermore, availability of information to the public remains poor as recent financial statements are not published on the MFEM website.

195. **The government operates an Integrated Financial Management Information System (IFMIS).** The IFMIS includes modules for general ledger, funds control, accounts payable, accounts receivable, purchasing, payroll/ human resources, and assets register. Since 2008, a Vanuatu Budget Management System (VBMS) has been used for the inputting of budget data by line ministries. The VBMS is directly linked to the IFMIS system. Access to the system(s) by line ministries is provided by a wide area network that covers all ministry headquarters in Port Vila and several provincial offices located in Santo. Financial reporting is now done by MFEM through off-the-shelf ledger reporting tools. There are a significant number of reports available from the system, however not all managers in the ministries have the training and/or the inclination to access these reports.

8.2 PFM and disasters

196. **A legal framework is established for disaster risk management.** The National Disaster Act of 2000 provides for the organization, functioning, powers, and responsibilities of disaster risk mechanisms. It also stipulates the elaboration of national and provincial disaster plans. The Meteorology, Geological Hazards and

Climate Change Act of 2016 sets out the framework for forecasting and hazards. It also established a National Advisory Board (NAB) for disaster risk reduction. The Disaster Risk Management (DRM) Act of 2019 provides the legal basis for disaster response. The legislation establishes the National Disaster Committee (NDC) and the National Disaster Management Office (NDMO). It provides mechanisms for emergency funding including the establishment of an Emergency Fund—and gives power to the above bodies to undertake and coordinate disaster response.

197. **The government has set up a coordination system to respond to emergencies and natural disasters.** The primary agency responsible for disaster risk recovery and management is Vanuatu's National Disaster Management Office. A National Disaster Plan provides for standard operating procedures and channels of communication during an emergency. Under the plan, the Director of NDMO reports to the Police Commissioner, the Director General of Internal Affairs, the Head of Provincial Affairs, and the Director General of the Prime Minister's Office. He must also work through his Director General (Ministry of Internal Affairs) to cooperate with other key line ministries. The NDMO is responsible to the chairman of the National Disaster Committee—the committee that oversees the response to disasters—for the management of all funds provided for disaster relief purposes. Prior authorization for the expenditure of such funds must be received.

198. **Funding for natural disasters may come from domestic and external sources.** The Ministerial Budget Committee needs to approve disaster funding, which may include supplementary appropriations funded from general revenue (see below), general and tied budget support from donors and other donor support. As per the Public Finance and Economic Management Act, all money received by way of donor aid shall be placed into a separate bank account of the implementing ministry or government agency and used for the purpose agreed with the donor and accounted for by the ministry or agency. Donor funds are released immediately when requested by the relevant agencies.

199. **The government has two mechanisms for releasing domestic funds in the event of a large-scale emergency.** First is the Emergency Fund, which can release up to VT 25 million based on the recommendation of the National Disaster Committee (NDC), the Council of Ministers, and the Prime Minister. If further funds are needed, the Disaster Fund can be released as a supplementary budget by the Prime Minister, reaching up to 1.5 percent of the national budget. The Minister must lay before the Parliament a statement showing the particulars of any expenditure made under the standing appropriation as soon as practicable after the expenditure has been made. During the response phase and upon the declaration of a State of Emergency, government resources are made available to the NDMO to coordinate response relief efforts and address the needs of the affected people. Each ministry is responsible for ensuring that resources are made available for the response, including personnel. The Department of Finance and Treasury (DoFT) is responsible to process all payments as instructed by the NDMO.

200. **PFM arrangements to govern disaster situations are limited.** When a disaster strikes, regular PFM procedures may need to be altered to achieve an optimal disaster response. For instance, for emergency procurements the Central Tenders Board has discretion to approve procurements that are not openly competitive. There are, however, no documented emergency procurement rules which clearly describe the extent of sole source or limited competition that may be undertaken. Furthermore, there is no guidance in budget circulars on how to incorporate disaster response matters into the national budget planning. Relatedly, budget tracking using the administrative classification of ministries does not allow (post-) disaster spending identification and performance assessment.

8.3 Policy implications

201. **The identification and tagging of disaster management and response spending is recommended.** Effective disaster management and response requires coordinated engagement from multiple sectors, ministries, agencies, and development partners. However, the link between budgets—which are sectoral—and disaster management and response is not always explicit. As a result, it is difficult to track and evaluate disaster management and response spending. To allow the IFMIS to provide oversight of disaster spending across all agencies and triangulate expenditure with performance data, it is necessary to tag disaster management and response in the budget (see Box 8.1).

Box 8.1: Developing a disaster responsive budget

Effective disaster management and response requires coordinated engagement from multiple sectors, ministries, agencies, and development partners. To effectively manage disaster spending across multiple agencies and funding sources, Vanuatu's Public Financial Management (PFM) system needs to be sensitive to disaster-specific requirements.

A functional PFM system enables the authorities to monitor budget releases against appropriations, follow-up on delays, and provide a cash flow requirement forecast against funding source for activities that remain outstanding. Such a PFM system should also capture actual expenditures on disaster interventions as well as performance data to allow policy makers to reallocate spending according to performance in order to generate greater value for money.

While disaster management and response plans have been developed—including some at the provincial level—budgets are sectoral and the link between the disaster plans and sector budgets is not always explicit. Therefore, it is impossible to know how these plans across sectors are actually being implemented (when a disaster strikes). Lacking information makes it therefore difficult to exercise

stewardship and coordination. Lastly, there are multiple donors who finance disaster response. This may complicate having a real-time picture of what interventions are financed, what gaps remain, and how spending may best be reoriented for a most effective engagement.

As a first priority, it is necessary to tag disaster management and response in the budget. This requires the determination of disaster management and response activities by sector ministries, a reflection of those activities in the budget, and budget tagging of such activities. This also includes a review of development partner activities for disaster content. Once disaster management and response are fully integrated into the budget, the financial management system can be adjusted to provide oversight of disaster spending across all agencies and triangulate expenditure with performance data.

202. **Several actions can be taken to implement the legal framework for disaster risk management.** First, for emergency procurements, the Central Tenders Board has discretion to approve procurements that are not openly competitive. However, there are no documented emergency procurement rules which clearly describe the extent of sole source or limited competition that may be undertaken. Second, according to the DRM Act, the minister responsible for Meteorology, Geological Hazards and Climate Change is to develop a guideline for the use of emergency funds. This should include the procedures for urgent request of funds and types of emergencies or disasters for which the funds could be utilized. However, no such guidance is publicly available. Finally, a review is needed of the DRM Act to include the implementation of disaster management and response audits. This would increase the reliability and effectiveness of disaster spending. Relevant reports, regulations, and guidelines should be made publicly available to improve accountability.

203. **Due to the unpredictable nature of post-disaster expenditures, a combination of financial instruments is recommended to finance recovery.** In general, it is recommended to consider a tiered approach to disaster risk financing—a strategy that includes different financial instruments for different layers of risk (see Box 8.2). Additionally, the evidence suggests that insurance and insurance-like instruments such as catastrophe bonds or contingent credit lines can protect the national budget and improve the speed at which capital is available and expenditure undertaken, therefore reducing the economic impact of natural disasters (de Janvry et al., 2016).

Box 8.2: Financial instruments for disaster recovery

It is essential to put in place actionable, comprehensive, transparent, and inter-ministerial DRM plans. For these plans to be implementable and cost-effective, governments should include a climate and disaster risk financing strategy as an integral component of their DRM plan. A brief overview of the instruments that are available and may be considered as part of the financing strategy include:

Ring-fenced ex-ante budget allocations: The most common source of post-disaster expenditure is the government's budget. Generally taking the form of a reserve fund, an annual budget allocation, or a contingency budget, it has the advantage of relatively low upfront costs compared to other financial instruments.

Emergency ex-post budget reallocations: Most governments do not have a reserve fund, an annual budget allocation, or a contingency budget dedicated specifically for natural disasters. In this situation, countries frequently rely on budget reallocations in the aftermath of a natural disaster. This endangers development programs, may take a long time to negotiate, and may thus limit immediate resource mobilization.

Risk transfer: In theory, the premium payments of risk transfer instruments may avoid the need to take on additional debt after a disaster event. In practice, however, risk transfer products are designed to provide quick liquidity and may not meet all of a government's ex-post financing needs.

Contingent financing: Contingent financing provides immediate access to liquidity to countries to address shocks related to a natural disaster (which may even include public health-related events). The release of funds is typically triggered by a declaration of a state of emergency, although the precise design of the triggers can be tailored to country circumstances.

Ex-post borrowing in the commercial market: While a country may be able to borrow easily on the commercial market before a disaster strikes, following a large disaster, borrowing in the commercial market may come at a relative steep cost of financing.

9. Education sector

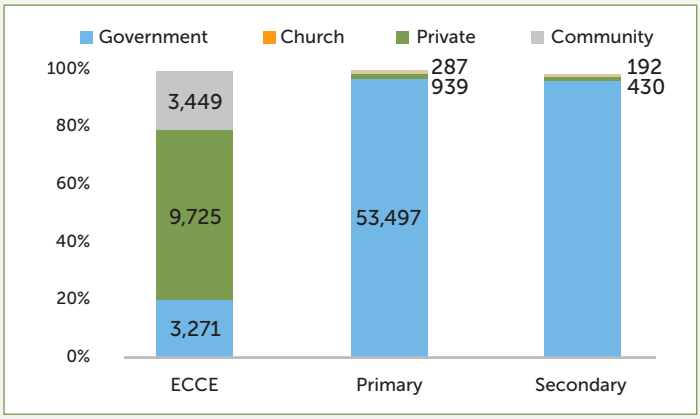
204. **This section analyzes public spending in Vanuatu's education sector.** Section 9.1 provides an overview of the education sector, while section 9.2 elaborates on how disasters affect learning and educational infrastructure. Section 9.3 starts with analyzing education spending, budget allocation, and execution in the education sector. The section also highlights how key challenges—including teacher performance, lack of teacher supplies, and limited student participation—have led to low numeracy and literacy skills. Based on this analysis, section 9.4 offers policy recommendations.

9.1 The education sector in Vanuatu

205. **Vanuatu's education system is managed by the Ministry of Education and Training.** The formal education system comprises Early Childhood Care and Education (ECCE) (ages 4 and 5), Primary School (ages 6 to 11), Secondary School (ages 12 to 18) and Post-Senior Secondary School, that is, technical, vocational and tertiary education (age 19 and over). Over 90,000 students are enrolled in nearly 1,500 schools, geographically dispersed across 83 islands. The Ministry of Training and Education (MoET) is responsible for delivering key education outcomes, including universal access to education, improving literacy, and developing skills for productive sectors. With the Office of Director General and four directorates responsible for each division, the MoET is the largest service provider and employer in Vanuatu. The department is assisted by several governance bodies: at the central level, there are the National Education Advisory Council, the National Curriculum and Assessment Board, and the National Scholarship and Training Board.

206. **There are more than eight school types administered by different authorities, including government, church, private and community schools.** The government assists most schools across primary and secondary education and ECCE facilities, in the form of a subsidy. In 2020, there were 876 ECCE facilities, 482 primary schools, and 114 secondary schools. Ninety-seven percent of primary and secondary school students enrolled in the existing government and government-assisted schools, whereas the remaining 3 percent of students enrolled in schools run by either churches or by the private sector and community. Private providers tend to be the largest service providers for children enrolled in ECCE (59 percent in 2019), while government and government-assisted providers account for less than 20 percent of total enrolment (Figure 9-1).

Figure 9-1: Total enrolment by school type and education authority (2019)

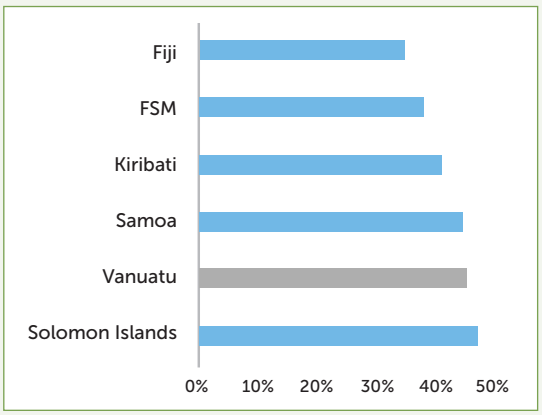


Note: Enrolment in church schools was 97 percent for primary and 31 percent for secondary schools. Source: MoET.

207. **Vanuatu has a dual education system whereby French and English streams of education are delivered in parallel with a common curriculum.** At the lower levels of education, the language of instruction for almost a third of ECCE students is either Bismala—one of the country's official languages—or a vernacular language spoken in the village. Vanuatu has over a hundred indigenous languages that are also encouraged to be taught at lower grades of the primary school. By the end of Year 3, however, the language of instruction is either French or English. To support the transition to English or French, the policy allows for using the agreed vernacular language for as long as necessary. The choice of the language of instruction tends to be affected by the language of the community where school is located. Almost two-thirds of primary and secondary school students are taught in English.

208. **Vanuatu has a young and growing population which translates into higher demand for education services.** Based on the most recent estimate, the total population of Vanuatu is nearly 300,000. Over a third of the population falls under the school-age population group, while 45 percent of the population is aged below 18. Both numbers are among the highest compared to peer countries (Figure 9-2).

Figure 9-2: Share of under 18 population in total population (percent of total)



Source: SOWC.

9.2 Education and disasters in Vanuatu

209. **Natural disasters have a major impact on education systems across the world.** These events tend to cause substantial damage to infrastructure, force children out of school, and negatively affect learning experience, among many other disruptions. The current literature also shows that beyond the short-term damage, natural hazards are also likely to have negative long-term impacts and implications on human capital accumulation.

210. **Vanuatu's vulnerability to natural disasters exposes its education facilities to significant risks.** Most of the education facilities in Vanuatu are exposed to disaster risk. The Vanuatu Risk Assessment Report found that 96 percent of school infrastructure is at high or very high risk to at least one hazard, including wind, earthquake, and tsunami. A third of all buildings are at high to very high risk to three or more hazards. The assessment also concluded that most buildings at very high risk are located on the islands of Ambae, Ambrym, and Tanna.

211. **School infrastructure in Vanuatu often fails to meet minimum construction standards, aggravating disaster risk.** The 2015 World Bank Mission Report highlighted key challenges facing school infrastructure. Many schools are over 30 years old and are degrading due to lack of maintenance and exposure to natural hazards, including a severe coastal environment. There are key structural vulnerabilities in the planning and building of schools, including lack of structural stability, lack of adequate foundations, and poor-quality material used in construction. Furthermore, many schools lack access to adequate WASH facilities. Despite fairly stable annual rainfall, longer dry periods lead to inadequate access to water. This problem is more acute for schools affected by volcanic eruptions.

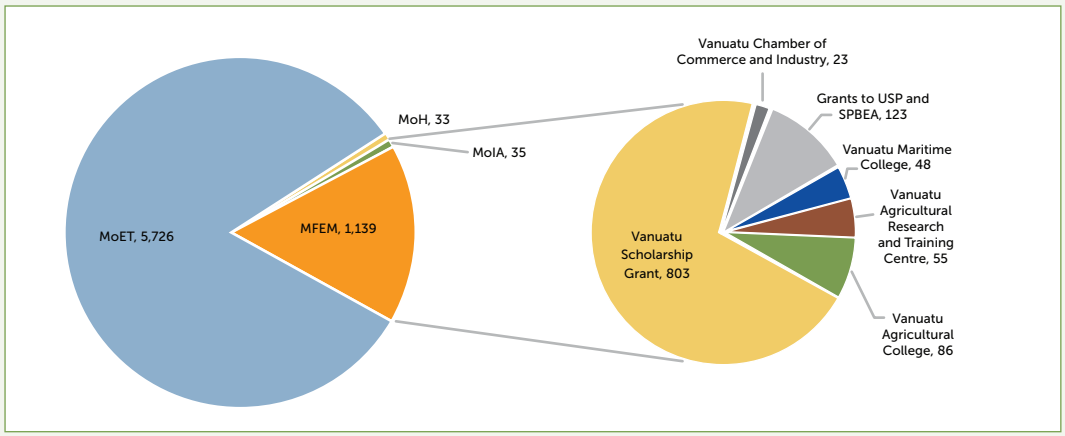
212. **Recent natural disasters had a devastating impact on Vanuatu's education facilities.** The Post-Disaster Needs Assessments (PDNAs) of TC Pam and TC Harold estimated the combined impact at nearly VT 10 billion. Hundreds of schools and ECCE facilities were completely destroyed or severely damaged. The PDNAs showed that the damage caused by the cyclones created additional demand for curriculum materials on top of regular requirements. Overall, over 50,000 students and thousands of teachers were directly affected by both cyclones. Similarly, the eruption of Manoro Voi volcano on Ambae island resulted in the closure of 77 schools, displacing all school children.

213. **Natural disasters also reduced school enrolments in Vanuatu.** TC Pam and the Ambae volcano eruption led to reduced school enrolments across primary and secondary schools in all affected provinces. Lower attendance was not only attributed to the destruction of school facilities, but also to students helping with recovery efforts and needing to generate income for their families. The Barriers to Education in Vanuatu Report shows that two-thirds of parents indicate that income loss due to a disaster is complicating access to education. As a result, young children end up taking on various household responsibilities instead of attending school.

9.3 Analysis of Vanuatu's education sector

214. **Spending on education has mainly been administered by the MoET.** The Ministry has generally accounted for over 80 percent of total education-related budget appropriations. However, some education- related spending is controlled by other ministries. For instance, the Ministry of Finance and Economic Management (MFEM) manages the Vanuatu Scholarship Grant (Figure 9-3). Furthermore, some funds allocated by development partners are managed by contractors.

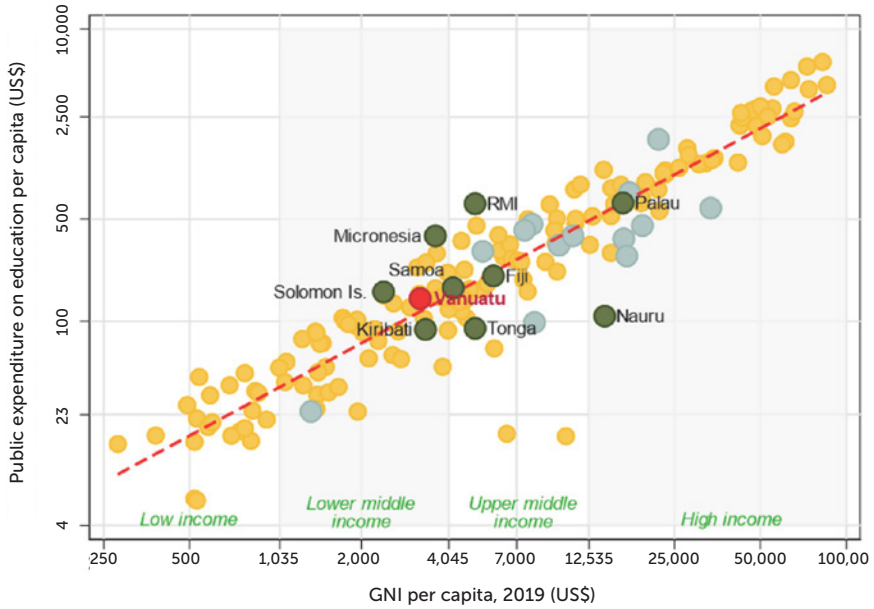
Figure 9-3: Education spending by ministries in the 2020 State Budget (VT million)



Source: Ministry of Finance and Economic Management (MFEM).

215. **Per capita education spending in Vanuatu is in line with its income peers.** In 2019, Vanuatu's spend on average was US$142 per capita on education, which is broadly in line with its income peers (see Figure 9-4). The per capita resources dedicated to education are higher compared to some Pacific countries (for example, Kiribati, Tonga, and Nauru), but lower compared to other PICs (Solomon Islands, Fiji, RMI). The level of education spending in Vanuatu partly reflects structural factors specific to Vanuatu—in particular the high proportion of school-age children in the overall population, high costs of providing education services in outer islands, large number of vernacular languages, and additional costs associated with providing two (English and French) systems of education.

Figure 9-4: Per capita education spending vs. GNI per capita



Note: Markers in light green are Caribbean island economies.
Source: WDI, IMF.

216. **Domestic funding is the major source of education spending, but development partner contributions are important as well.** Overall, domestic funding comprised on average 85 percent of total education expenditure from 2015 to 2019. Based on the 2020 Budget, nearly VT 1.5 billion was provided by donors in the form of cash grants and aid in kind. Donor support is particularly important given a large share of domestically sourced expenditure is spent on payroll and administrative support to education. The support received from development partners focuses on rehabilitation and building of schools, scholarships, teaching materials, and support on planning and budgeting. Australia and New Zealand are the biggest bilateral contributors to Vanuatu's education system.

217. **Private households' out-of-pocket expenditure is another important source of education-sector financing in Vanuatu.** The 2010 household survey shows that education costs comprise 5.2 percent of total expenditure of an average household each month (an average of VT 2,808 per month). This amount can be taken to include school fees and costs such as school uniforms, stationery, fundraising, etc. In addition to direct financial cost, households also incur indirect financial costs, such as costs associated with travelling long distances to use education services.

218. **Education spending has increased in recent years due to successful efforts in expanding access.** In 2010, a School Grant Scheme was introduced for primary schools, and later extended to secondary schools and ECCE facilities (see Box 9.1). Budgeted grants to schools rose from VT 508 million in 2015 to over VT 1.1 billion in 2019.[41] In 2018, the Parliament approved subsidization of the cost of tuition fees for all children aged four and five years with the aim of improving the coverage of early childhood education. This policy yielded an immediate outcome with enrolment in ECE facilities rising from 8,800 in 2016 to 16,445 in 2019, and the share of out-of-school children aged four and five reduced from 56 percent in 2016 to 16 percent in 2018.

[41] While discussions have been ongoing to introduce corporate and personal income tax, the Government of Vanuatu has decided to defer any decisions on the issue. In their latest Budget Strategy, the GoV did consider raising soft drinks and tobacco taxes.

Box 9.1: School Grant Scheme

The School Grant Scheme was introduced to improve access to education by eliminating financial obstacles that prevent parents from enrolling their children in schools. The policy was intended to support the MoET's aspirational goal of fee-free basic education. When introduced in 2010, the grant was allocated for Year 1 to 6 students. The scheme was extended to cover ECCE facilities and secondary schools in 2018.

Grants are usually paid in two instalments directly to the bank account of all eligible government and non-government-assisted schools. In 2020, school grants per student per year stood at VT 9,000 for ECCE facilities, VT 8,900 for primary schools, and VT 42,000 for secondary school students. Total amounts received by schools depend on enrolment numbers.

In return, schools that receive grants are expected to reduce the tuition fee to ease the financial burden on parents. In addition, grants may be used for expenditures that directly benefit students, including maintenance and renovation of school buildings, and purchasing school supplies.

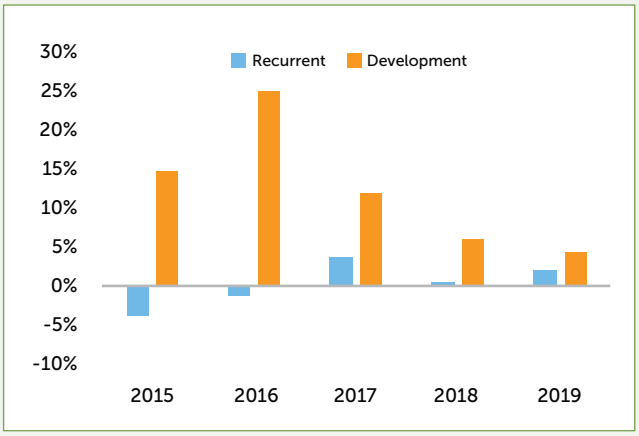
To be eligible for the grant, schools must meet certain criteria, including being registered with the MoET, submitting monthly and annual financial reports, and participating in surveys. In 2020, school grants benefitted 11,501 ECCE students (70 percent of total), 53,606 primary school students (95 percent), and 11,135 secondary school students (46 percent).

Despite the government's intention to provide free education, most schools continue to charge parents to meet the costs of running the school. Financial contributions of parents include both formal and informal payments related to a child's education.

219. **Recurrent budget execution has been reasonably accurate.** The average absolute deviation of the actual spending from budgeted spending was 2 percent. Earlier years have seen lower than budgeted spending while deviation turned favorable from 2017 onwards. In all instances, these outcomes have been driven by the wage bill (discussed below), which accounts for the largest share of the recurrent spending. Considering the size of the portfolio and deviations in spending of other ministries, this can be considered a reasonably accurate execution of the budget on an aggregate level.

220. **The development budget has been consistently underspent.** Between 2015 and 2019, capital spending was underspent by 13 percent on average. Tendency to underspend raises concerns about the country's absorptive capacity. The problem became more evident following commencement of post-cyclone recovery and reconstruction works. Delivering such a large pipeline of capital projects required high institutional and physical capacity, which Vanuatu lacks. This led to large underspend in capital budget in 2015 and 2016. The 2016 State Budget noted that some of the funds required to meet TC Pam recovery and reconstruction activities, and also fund the government's major projects, were rolled over to 2017 and 2018 due to delays in implementation caused by poor weather conditions and board approvals.

Figure 9-5: Accuracy of budget execution



Source: MoET annual reports.

221. **Compensation of employees accounts for the largest share of recurrent expenditure, higher than Pacific peers.** Payroll expenses hovered between 70 and 78 percent from 2015 to 2019, down from 90 percent in 2007. Despite this decline, the figure remains elevated compared to other countries in the region. For example, payroll spending constituted 43 percent of total recurrent education spending in Solomon Islands in 2017. In the different states of FSM, personnel expenditure accounted for between 44 percent and 66 percent of total expenditure. Similarly, Fiji's wage bill as a share of total operating expenses in 2017 was just above two-thirds.

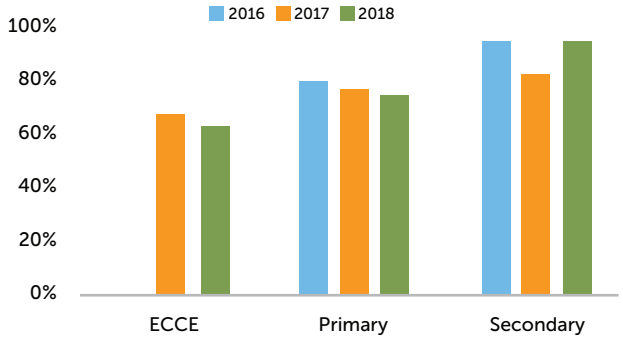
222. **Managing payroll expenditure has been challenging, affecting teacher performance and motivation.** Data from earlier years suggest that there has been a tendency to overspend, while more recent data suggest reversal of the trend. In 2015 and 2016, the Ministry overspent its payroll budget by 5.7 percent and 1.7 percent, respectively. From 2017 onwards, payroll budget expenditure had a positive remaining balance. For example, in 2019, there was an underspend of VT 162 million (3.2 percent of the

budgeted wage bill), which was due to unfilled vacancies as well as payroll savings from teachers' payroll. Outstanding teacher salaries is another salient feature of education sector management in Vanuatu. Many teachers are not paid on time, affecting teacher performance and motivation.

223. **Lack of certification and limited understanding of the curriculum may also affect teacher performance.** Non-certified teachers are those who are teaching without going through a formal teaching program. In 2018, 35 percent of teachers in ECCE and 26 percent in primary schools in 2018 were not certified. Overall, the share of qualified teachers declined from 85 percent in 2016 to 76 percent in 2018.[42] Furthermore, survey results show that many teachers and provincial authorities do not fully understand the purpose and content of the curriculum.

224. **An increase in the number of teachers reduced student-to-teacher (STR) ratios, but regional inequities exist.** The increase in the number of teachers across all education pillars has contributed to reducing STR ratios. The STR ratio stands at 14:1 for ECCE, 29:1 for primary schools and 26:1 for secondary schools, largely in line with national targets (15:1 for ECCE, 30:1 for primary schools and 25:1 for secondary schools). While STR ratios across all categories have declined, wide variation exists across provinces. It ranges from 10:1 in the Torba province to 25:1 in Shefa province for ECCE facilities. Disparities also exist for primary and secondary schools, although the variation is smaller.

Figure 9-6: Share of certified teachers by education pillar



Source: Education Annual Statistical Digest (2016–18).

225. **Teacher absenteeism compromises the quality of education.** Although representative data on absenteeism are missing, anecdotal evidence suggests that lateness and absence of staff is common. The evidence suggests that high teacher absenteeism is likely to lead to high student absenteeism and poor learning outcomes. A survey of schools in the urban centers of Port Vila and Luganville completed in 2018 indicates that on the day of survey over 10 percent of teachers were absent from their classroom.[43] It is likely that the level of absenteeism is much higher in rural areas.

[42] While discussions have been ongoing to introduce corporate and personal income tax, the Government of Vanuatu has decided to defer any decisions on the issue. In their latest Budget Strategy, the GoV did consider raising soft drinks and tobacco taxes.
[43] https://moet.gov.vu/docs/policies/Urban%20School%20Study%20Report_2019.pdf

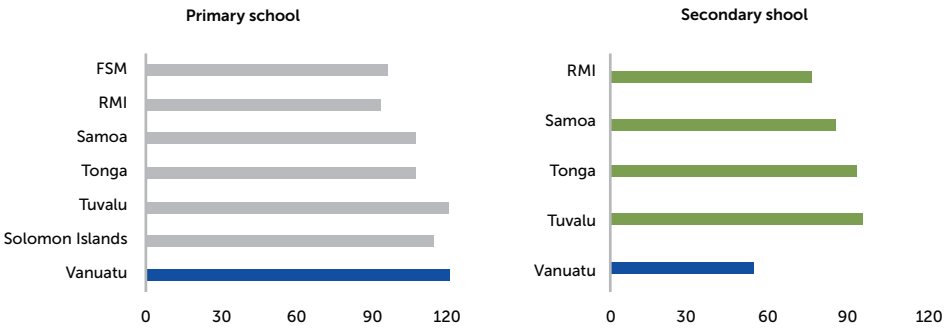
226. **Poor availability of teaching supplies further deteriorates the quality of education.** Spending on textbooks and other teacher supplies has been crowded out by the relatively high spending on personnel. As such, the availability of textbooks in primary schools, particularly social and basic science, is low. For instance, in government primary schools, the student-to-textbook ratio stood at 3.1 percent in 2018, corresponding to one usable textbook per 33 pupils. A lack of printed material in the local language further compromises the quality of education.[44] That is, many students speak a vernacular language at home, but find it difficult to study in English or French without supporting material in their native language.

227. **School grants have helped increase enrolment rates, although timely participation in education remains problematic.** Government efforts have helped to increase access to primary school, evidenced by an increase in the Net Intake Rate[45] (NIR) from 45 percent in 2016 to 60 percent in 2018. On the other hand, the Gross Intake Rate[46] (GIR) has grown from 123 percent to 154 percent over the same period. This may be attributed in part to increased enrolment at ECCE facilities, particularly at a later age, leading to a delayed start of primary school. On the other hand, the low NIR—one of the lowest in the region—reflects low participation in the education system and a tendency for children to start at a late age. Long distances to education facilities, poor road infrastructure, limited income generating ability of parents, and social and cultural norms are contributing factors to low NIR rates. Furthermore, education in Vanuatu is not compulsory, which creates an additional challenge.

228. **Low overall participation in the early years of education is reflected in a high Gross Enrolment Rate (GER) in primary schools.**[47] The analysis of the GER reveals two important findings. First, the GER has grown in primary school from 112 percent in 2016 to 127 percent in 2019—the highest in the Pacific region (Figure 9-7). The GER in secondary school recorded only a 1 percentage point growth rate. The low GER can be largely explained by the high dropout rate in secondary school which is attributed to high perceived costs of sending children to secondary school. In addition, a considerable gap between the GER and Net Enrolment Rate (NER) in primary school points at a large number of overage and underage students and a high repetition rate among Year 1 to 6 students, which stood at 24 percent in 2018.

[44] Research has shown the importance of local language schooling for educational quality and academic achievement (Bender et al., 2005; Benson, 2004).
[45] Net intake rate in Grade 1 is the number of new entrants in the first grade of primary education who are of official primary school entrance age, expressed as a percentage of the population of the corresponding age.
[46] The gross intake ratio in first grade of primary education is the number of new entrants in the first grade of primary education regardless of age, expressed as a percentage of the population of the official primary entrance age.
[47] The gross enrolment ratio is the number of students enrolled in a given level of education, regardless of age, expressed as a percentage of the official school-age population corresponding to the same level of education.

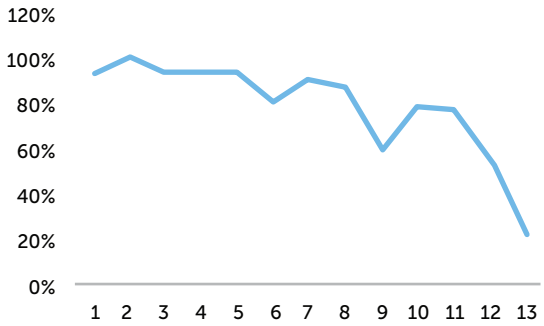
Figure 9-7: GER at primary and secondary school in selected Pacific countries



Source: WDI.

229. **In secondary school, both the GER and the NER are substantially lower, explained by high dropout rates**. In 2019, the GER in Vanuatu was 47 percent, one of the lowest in the region (see Figure 9-7). Furthermore, in 2018 the average dropout rate in secondary school in Vanuatu was 18 percent. As a result, the survival rate to Year 13 is only 23 percent (Figure 9-8). Finally, the mean number of years of schooling—which is based on the actual schooling received by the population with ages 25 years and above—was below seven years, indicating that most adults only received or completed primary education. While boys and girls generally have similar enrolment rates for primary and secondary education, there are substantially more boys in secondary education aged 18 and over, suggesting that boys are more likely to finish school despite being overage.

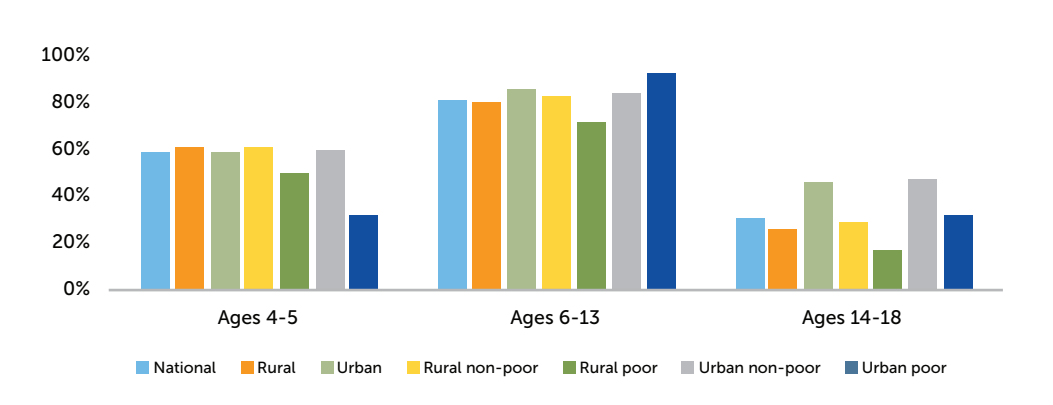
Figure 9-8: Retention rate by school year



Source: ETTSA.

230. **Limited income generating capacity, distance, and parental beliefs clearly affect enrolment, resulting in inequities in access to education services.** Even though school grants have been introduced in 2010, still many schools request contributions from parents. In addition to the direct financial cost, long distances combined with high opportunity costs can dissuade parents and students from using education services. As a result, rural households are less likely to have their children enrolled in school, especially in the later years of education (Figure 9-9). The fact that older boys are often taken out of school to work in gardens on high value crops such as kava illustrates this point. Relatedly, poor households are more likely to sacrifice a child's education in response to financial hardship. As expected, enrolment is higher for non-poor households both in rural and urban areas across all education levels (Figure 9-9). Finally, the abovementioned issues of teacher performance and quality lowers the parental perception of the value of education, contributing to high dropout rates. Context-specific factors such as low parental education, a belief that educational attainment and income are unrelated, and a perceived disconnect between the curriculum and daily life may further lower parental valuation of education.

Figure 9-9: Enrolment by location and income status



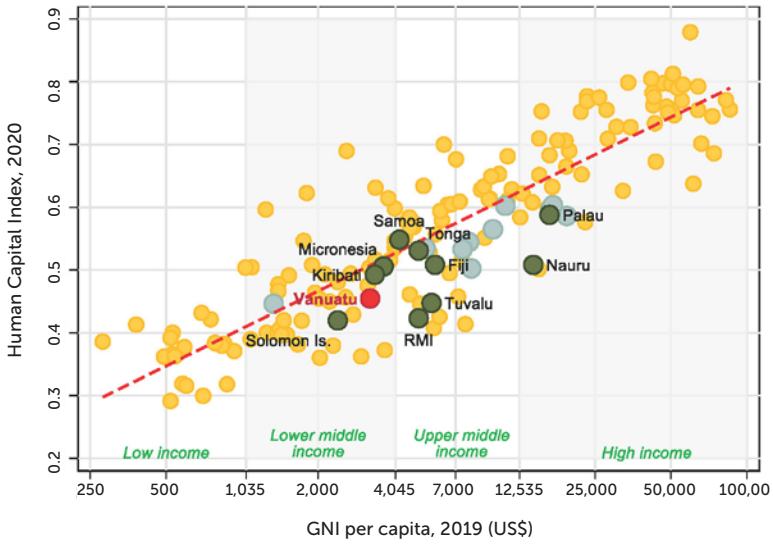
Source: MoET annual reports.

231. **The abovementioned challenges in the education sector—including natural disasters—have led to weak literacy and numeracy skills.** Results from harmonized test scores indicate that students from Vanuatu are outperformed by many of their Pacific peers.[48] Weak numeracy and literacy skills of primary school students are also evidenced by a pilot test conducted by the MoET. Test results tend to be lower across both English- and French-speaking schools in 2016, a year after TC Pam, highlighting the disruptive impact of natural disasters on education in Vanuatu.

[48] Students from Vanuatu have outperformed their peers only from Tuvalu, ranking 9 out of 10 Pacific countries.

232. **Vanuatu's Human Capital Index (HCI) score is below the average of its income and regional peers**. Developed by the World Bank, the HCI measures the amount of human capital that a child born today can expect to attain by age 18. Vanuatu ranks among the lowest in the region across three education-related indicators. The overall HCI score of 0.50 indicates that a child born today will be only half as productive when they grow up as they would have been had they had optimal health and education services. In comparison, the HCI score was 0.45 in 2020, lower than most of its Pacific (and Caribbean) peers and also below its income peers (see Figure 9-10). Similarly, Vanuatu's Human Development Index score is among the lowest in the region. With an index score of 0.609, Vanuatu ranks 140th out of 189 assessed countries.

Figure 9-10: Human Capital Index vs. GNI per capita



Note: Markers in light green are Caribbean island economies.
Source: WDI, IMF.

9.4 Policy implications[49]

233. **To improve the efficiency of education spending, priority must be given to increase the stock of learning resources.** Vanuatu's public spending on education is on par with its income peers. However, higher spending has not translated into better education outcomes, suggesting inefficiencies in service delivery. At present, the wage bill absorbs a large share of education spending, leaving relatively small amount for much-needed teaching materials and public investment. Between 2018 and 2030, Vanuatu's population is set to grow at 2.2 percent per year, higher

[49] The proposed policy recommendations are broadly in line with the Vanuatu Education and Training Sector Strategic Plan (2020–30).

than other countries in the region. Against a tight fiscal environment, improving the efficiency in education spending, and allocating resources to priority areas, is needed to deliver quality education services for a growing population. The government should therefore consider shifting the financial resources to ensure an adequate level of learning resources at all schools, including teaching supplies in the vernacular language. While the latter is a challenging task with over one hundred languages spoken across the country, it is an important contributing factor for the quality of education and educational outcomes.

234. **Improving teacher management could lead to better value for money.** Two key actions can be taken to improve teacher performance. First, financial and non-financial incentives could improve teacher motivation. Considering monetary incentives for teachers who perform well and improving teacher monitoring and evaluation could have far-reaching implications on teacher absenteeism and quality of teaching. This requires, however, improved financial management and timely payment of teacher salaries as well as effective mechanisms for monitoring and evaluation. Second, the rapid increase in number of teachers has not been matched by improved quality of teaching. Well-targeted professional development programs and in-service teacher training opportunities could help address teachers' pedagogical challenges and stimulate a performance-driven mindset.

235. **Action is needed to improve equitable access to education in Vanuatu.** While a lack of financial resources plays an important role, the improvement of equitable access to education requires complex solutions. A revision of the school grant formula to eliminate parental contributions, particularly for poor households, could be part of the solution. Furthermore, there is a need to raise parental awareness on the importance of enrolling children at school at the right age and advocating for the long-term benefits of education. Next, facilitating transportation, especially in remote areas, may lower the costs of sending children to school. Finally, providing instruments and support to restrict children's participation in income-generating activities can have important implications on the access and equity aspects of education.

236. **While natural disasters cannot be averted, necessary mitigation and prevention measures are needed to curb their damages.** As such, it is crucial for Vanuatu to reflect on the past experiences to enhance the safety of schools and improve disaster-resilience in the education sector. Public investment is needed to reduce high and very high-risk schools and/or buildings to a more acceptable level. Furthermore, schools falling under moderate risk level may also require intervention to reduce exposure and vulnerability. Ensuring regular maintenance of education facilities is important to maintain an acceptable level of risk. Considerations should be also given to improve non-physical interventions, such as improving, strengthening, or complying with the institutions and regulatory environment, and the development of safer school maps.

237. **The adoption of remote learning methods could help address challenges related to accessibility, flexibility, and affordability of education services.** Digital technologies can help increase resilience of the education system by ensuring continuity in the aftermath of a natural disaster. In addition, distance learning carries a substantial potential to provide low-cost access to education to students from remote areas. While a transition to remote teaching seemed unrealistic, the experience of the pandemic showed that remote learning policies and practices—including TV/radio-based teaching, take home packages, etc.—can quickly be adopted. However, the introduction of remote teaching comes with its own challenges, most importantly ensuring equitable access to technological resources and a closing of the digital gap.

10. Health sector

238. **This section analyzes public spending in Vanuatu's health sector.** Section 10.1 provides an overview of the health sector, while section 10.2 elaborates on how disasters and the COVID-19 crisis have affected the health sector. Section 10.3 starts with analyzing health spending and shows that despite clear disparities, Vanuatu performs reasonably well in terms of health outcomes relative to other PICs. Despite this, section 10.4 provides recommendations to improve efficiency and equity in the health sector.

10.1 The health sector in Vanuatu

239. **The Vanuatu health care system is managed by the Ministry of Health.** The core mission of the Ministry of Health (MOH) is to protect and promote the health of all people in Vanuatu. It seeks to achieve this through three core functions: first, the delivery of quality, equitable health services to all the people of Vanuatu; second, the promotion of healthy behaviors and management of diseases; and third, the effective regulation and governance of health care and associated industries. The MOH chief officer is the Director General (DG) who leads the executive management team. The team comprises a Director of Policy Planning and Corporate Services, a Director of Public Health, and a Director of Curative and Hospital and Services.

240. **The MOH operates a network of facilities across the country which provide health care services.** These facilities are mainly hospitals, health centers, and dispensaries. These government owned facilities are supplemented by a small private health sector, church-based health facilities and Health Aid Posts (HAPs). HAPs are staffed by Village Health Workers (VHWs) and often managed and financially supported by the communities within which these HAPs are located. In 2019 there were more than 245 HAPs, 91 dispensaries, 34 health centers, and six hospitals. Each province has one hospital. The hospital in Sanma province also functions as a regional referral hospital, and the hospital in Shefa province functions as the national referral hospital.

241. **Four different levels of health care are provided in Vanuatu.** The first line of care is Community Care, provided largely at village-level HAPs. HAPs are not under the management of the government, nor are VHWs considered employees of the government. A such, HAPs remain an unregulated part of Vanuatu's health care system. The MOH does, however, provide training, basic supplies, and strategic support to VHWs. The second level of care is Primary Health Care, provided at dispensary and health center facilities. The third level of care is Secondary Health Care, provided at provincial hospitals in four provinces (Tafea, Penama, Malampa, and Torba). The hospitals focus on general clinical services and essential trauma care, child health and nutrition, communicable disease, sexual and reproductive

health, maternal and newborn health, and non-communicable disease including mental health and environmental health. Tertiary Health Care is provided at referral hospitals in two provinces: in Sanma through Northern Provincial Hospital (NPH) and in Shefa through the Vila Central Hospital (VCH).

242. **In 2019 a national referral policy for health care services was launched.** This policy was designed to assist in the planning and coordination of patient care between the different levels of health care services. The policy was developed to address inconsistencies in patient referral, reduce overcrowding of referral hospitals, provide clear roles and responsibilities of health care workers for different levels of care in health facilities, and reduce the increasing costs associated with patient referrals. In addition to domestic referrals, Overseas Referral Support is provided to patients with medical conditions that cannot be treated by the health services provided by the domestic health system.

10.2 Health and disasters in Vanuatu

243. **Natural disasters have had a major impact on Vanuatu's health sector.** In 2015, TC Pam caused serious damage to 39 health facilities throughout Vanuatu, including the main hospital in Port Vila. TC Pam also increased the risk of acute diarrhea, led to late treatment of infected wounds and fractures, and communicable disease outbreaks including dengue and leptospirosis. TC Pam also interrupted the treatment of chronic conditions such as hypertension, diabetes, and mental disorders. In 2017 and 2018, the entire population of Ambae—approximately 11,000 people—were temporarily evacuated due to increased volcanic activity. Heavy ash from the volcano increased the risk of respiratory illnesses, and contaminated food and water. In 2019, 51 health care facilities were temporarily closed, in part due to the effects of natural disasters. In 2020, TC Harold caused severe damage to 81 health care facilities (Table 10-1),[50] resulting in major disruptions to routine health services. Following TC Harold, an outbreak of leptospirosis was recorded in Samna Province. TC Harold also caused injury and death due to building collapse, wind-strewn debris, drowning, and existing illness. The long-term effects from TC Harold likely include increases in water- or vector-borne communicable diseases.

Table 10-1: Damage to health facilities caused by TC Harold

Facility Type	Sanma	Penama	Malampa	Total
Aid post	19	8	11	38
Dispensary	15	11	2	28
Health center	6	4	3	12
Hospital	1	0	0	1
Subto-tal MoH facilities	41	23	16	80
Administration	1	0	0	1
Total	**42**	**23**	**16**	**81**

Source: TC Harold, Post Disaster Needs Assessment report (2020).

[50] The The estimated monetary value of the damage to facilities and equipment caused by TC Harold was US$16 million.

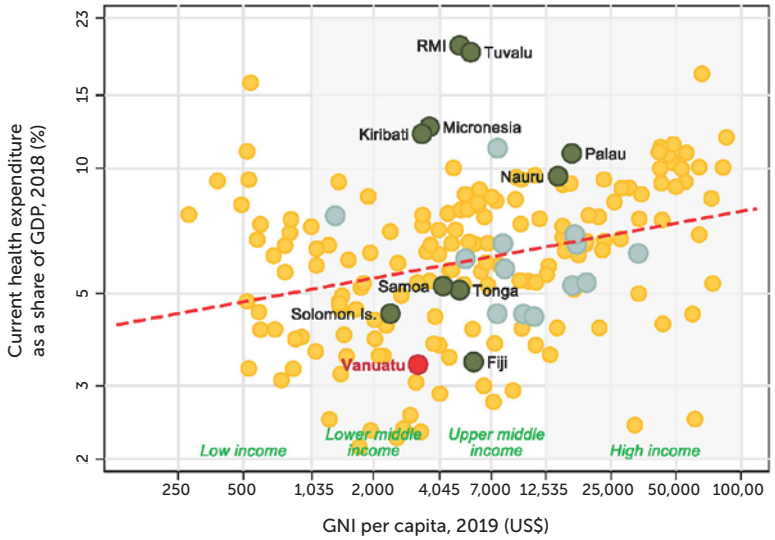
244. **The COVID-19 pandemic has made 2020 a challenging year for the Ministry of Health (MOH).** Soon after the WHO declared COVID-19 a pandemic in March 2020, Vanuatu quickly began its preparations and response to the pandemic. A health management incident team was established to manage and coordinate the health sector response to the pandemic. A COVID-19 Preparedness and Response Plan was developed and seen as a living document that would evolve and be adapted as the COVID-19 situation evolved. In May 2020, lab testing capability became available in the country using the gene expert machine. Significant amounts of MOH resources were redirected towards supporting the COVID-19 response, potentially at the expense of routine health services.

245. **Vanuatu did strengthen its disaster resilience in the health sector following the onset of the COVID-19 crisis.** The pandemic made clear that risk planning and management are of crucial importance for an effective disaster response. Consequently, the Ministry of Health launched the National Health Plan for Disaster Risk Management and Climate Change Adaptation in July 2021. The plan provides a clear course of action to prevent, prepare, respond, and recover from disasters, including disease outbreaks and epidemics. In addition, during annual preparation of the budget, it was found that in past budget cycles no funds were allocated for disaster response. During the 2021 planning and budget cycle, the MOH instructed all cost centers to ensure a budget line was created for contingency funds, which would be used when a disaster occurs. These funds would also be kept at the provincial level to enable quick access when responding to any disasters. Furthermore, on 20 August 2021, the Ministry of Health launched the Vanuatu Outbreak Alert System (VOAS) as part of the country's preparedness and response to the pandemic. The VOAS informs the public about disease outbreaks and provides recommendation to mitigate impacts.

10.3 Analysis of Vanuatu's health sector

246. **Health spending, largely funded by domestic sources, is low compared to Pacific and income peer countries.** Overall, domestic funding comprised on average 84 percent of total health expenditure from 2016 to 2019. The remaining 16 percent comes from development partners, with DFAT, ADB, and UN organizations as the main contributors. Between 2016 and 2019, on average 10.5 percent of total recurrent expenditure was allocated to the health sector, which is equivalent to about 3 percent of GDP. As Figure 10-1 illustrates, the current health spending (as a percent of GDP) is low compared to both regional (Pacific and Caribbean) and income peer countries.

Figure 10-1: Current health expenditures vs. GNI per capita



Note: Markers in light green are Caribbean island economies.
Source: WHO, WB.

247. **Hospital payroll consumes the largest share of health expenditure in Vanuatu.** Hospital spending accounted for 46 percent of total health expenditure in 2019 (Table 10-2). Vila Central Hospital (VCH), the main referral hospital, consumed more than half of total hospital expenditure. The Northern Provincial Hospital (NPH), the second referral hospital consumed 27 percent of hospital expenditures. For all the hospitals, payroll continues to crowd out operational expenditure with most hospitals consistently overspending on their payroll allocation. For instance, hospital payroll increased from 74 percent in 2016 to 81 percent in 2019, while operational expenses fell from 26 percent to 19 percent. In 2019, a major stock out in medicine supplies partly contributed to the drop in operational expenditures.

248. **Overall expenditure on Community Health Services (CHS) almost doubled between 2016 and 2019.** In 2019, VT 561 million was spent on CHS, up from VT 289 million in 2016 (Table 10-2).[51] The Samna CHS expended 24 percent of total CHS expenditures, while the Malampa CHS expended 24 percent of CHS expenditures. Payroll dominates CHS spending. Most of the increases in CHS spending come from a year-on- year jump in the base wages. In addition, in 2018 the first ever goodwill payment for Village Health Workers was paid. Unsurprisingly, payroll also dominates Community Health Services expenditures. For instance, in 2019, 84 percent of CHS expenditures were directed at wages, allowances and other personnel costs.

[51] The increase in community level expenditures partly reflect the government's push to decentralize health services.

Table 10-2: Domestic health expenditure by administrative level (VT million)

	2016	2017	2018	2019	May 2020
Hospital	838.5 (51%)	1030.9 (51%)	1345.9 (49%)	1,329.3 (46%)	656.0 (50%)
Community Health Services (CHS)*	288.7 (17%)	324.1 (16%)	498.8 (18%)	560.9 (19%)	253.2 (19%)
Central support services	218.7 (13%)	292.8 (15%)	458.3 (17%)	496.4 (17%)	161.3 (12%)
Central Medical Store	219.3 (13%)	224.7 (11%)	230.1 (8%)	260.1 (9%)	148.8 (11%)
Cabinet	64.4 (4%)	94.3 (5%)	99.8 (4%)	107.1 (4%)	37.1 (3%)
Public health programs (National)	25.9 (2%)	41.6 (2%)	102.79 (4%)	132.31 (5%)	43.9 (3%)
Total	**1,654.9**	**2,008.3**	**2,735.5**	**2,886.1**	**1300.3**

* Represents health centers, health dispensaries, and administration/management of provincial health services.
Source: Financial Management Information System reports (2016–May 2020).

249. **Public health programs are mainly funded by development partners.** UNICEF is the major funding partner for Vanuatu's immunization program, with recent co-financing from the ADB. The malaria program on the other hand is largely funded by the Global Fund, with support from the WHO and DFAT. Also for the TB program, the Global Fund provides the majority of financial resources. However, for all three public health programs, the Government of Vanuatu increased its spending.

250. **Low Bed Occupancy Rates (BORs) suggest the need for using existing hospital resources more efficiently.** In 2018, the average Bed Occupancy Rate (BOR) for hospitals in Vanuatu was only 28 percent, indicating very low utilization for inpatient services (Table 10-3).[52] Occupancy rates vary across hospitals, with the Torba hospital having an occupancy rate of only 1 percent, while the national referral hospital in Shefa having an occupancy rate of 44 percent. Given that across all provinces hospitals account for most of Vanuatu's health spending, there is a need to make hospitals work more efficiently to maximize the resources they consume.

Table 10-3: Bed occupancy rates

Province	2016	2017	2018
Malampa	22	25	20
Penama	27	27	27
Sanma	35	34	35
Shefa	53	52	44
Tafea	33	39	40
Torba	2	2	1
Vanuatu	**29**	**30**	**28**

Source: MOH 2018 health information systems report.

251. **The health worker density in Vanuatu is low, leading to inequities in the provision of health care services.** In 2019, an estimated 15.6 skilled health care workers per 10,000 population were available in Vanuatu, down from 24.04 health workers per 10,000 population in 2012. A significant factor to the decrease in health worker density was the large retirement wave of nurses in 2017 (nurses account for approximately 50 percent of the health worker population in Vanuatu). A lack of succession planning and a missing nursing workforce plan caused the large retirement gap. The resulting staff shortages caused the temporary closure of certain health care facilities. Furthermore, an uneven distribution in the supply and deployment of health workers led to inequities in the effective provision of health services. For instance, in the Shefa province an estimated 2.4 doctors per 10,000 population are available, while in the Torba province no doctors are present (Table 10-4).

Table 10-4: Doctors per population at the provincial level

Province	Shefa	Sanma	Penama	Malampa	Tafea	Torba
Population	107,422	59,636	35,817	45,046	40,778	11,183
Doctors (2020)	26	12	3	6	4	0
Doctors/population	2.4	2.0	0.8	1.3	1.0	0.0

Source: World Bank.

[52] For hospitals to be adequately utilized, occupancy rates in the vicinity of 70-90 percent are expected (especially for large hospitals).

252. **Outpatient visits have increased in the last few years, but regional inequities exist.** Outpatient visits are an important measure of overall access to health services. In Vanuatu, two important factors that influence outpatient visits include the health seeking behavior of the population and the ease with which persons can access health facilities and their services. Outpatient visits have increased from 1.4 visits per person in 2016 to 1.9 visits per person in 2019.[53] There are, however, regional disparities. For instance, the Shefa province records 0.55 hospital outpatient visits per person, while the Penama province only records 0.11 hospital outpatient visits per person.

253. **Non-Communicable Diseases (NCDs) pose an increasing burden on Vanuatu's health system.** On average, health facilities see one person every eight minutes for NCD-related treatments. In 2018, there were over 67,000 consultations related to the management and treatment of NCDs across all health facilities in Vanuatu. Over the period 2016 to 2018, new cases of diabetes in females increased from 573 to 1,717, corresponding to a 200 percent increase. For males the increase was from 425 to 2,701, corresponding to a 536 percent increase (Table 10-5).[54] Also, heart disease saw a large increase among both males and females.

Table 10-5: New visits by NCD condition (2016 and 2018)

	Females			Males		
	2016	2018	Increase (%)	2016	2018	Increase (%)
Arthritis	1,905	2,483	30	1,618	2,368	46
Cancer	29	44	52	11	15	36
Diabetes	573	1,717	200	425	2,701	536
Heart disease	38	138	263	57	178	212
Hypertension	899	1468	63	777	1,370	76
Stroke	100	127	27	93	218	134
Tooth and gum disease	12,506	10,792	-14	7,500	9,389	25
Total	**16,050**	**16,769**	**4**	**10,481**	**16,239**	**55**

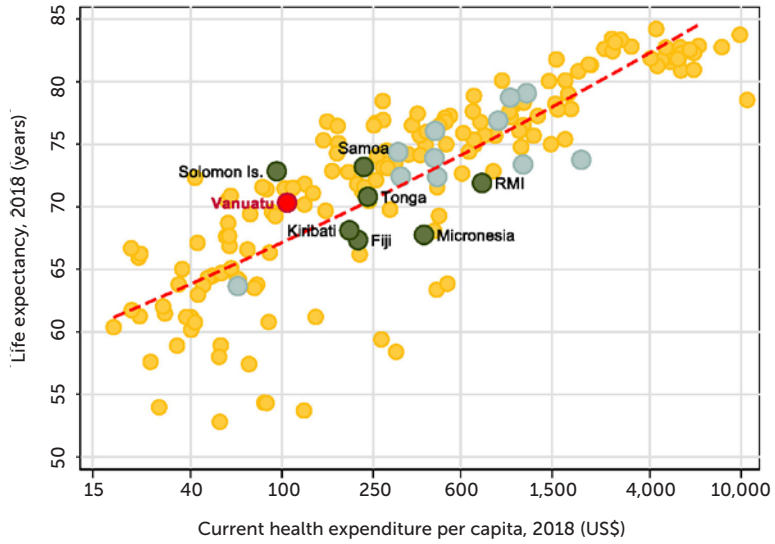
Source: World Bank.

254. **Vanuatu performs relatively well in terms of health outcomes, despite the abovementioned inefficiencies and health burden.** Life expectancy in Vanuatu is 70.32 years, higher than the life expectancy in Fiji (67.3 years), Kiribati (68.1), and PNG (64.2). Furthermore, the country's life expectancy is higher than what one would expect, based on its per capita health spending (Figure 10-2).[55] The adult mortality rate—the probability of dying between 15 and 60 years old—is lower compared to Fiji, Solomon Islands, Kiribati, and PNG. Vanuatu also has a lower

[53] Health centers and dispensaries account for 52 percent of all outpatient visits in 2018, followed by hospitals at 37 percent and aid posts at 11 percent.
[54] Better screening programs and improved data collection may have contributed to the increased numbers been detected.
[55] Several factors influence life expectancy beyond health spending, so figure 10-2 should be interpreted with caution.

maternal mortality rate than a number of Pacific peer countries, even when compared to countries with similar levels of per capita health spending. While so, according to the maternal death review committee, most of the maternal deaths were deemed to be preventable.

Figure 10-2: Life expectancy vs. per capita health spending



Note: Markers in light green are Caribbean island economies.
Source: WHO, WB.

10.4 Policy implications

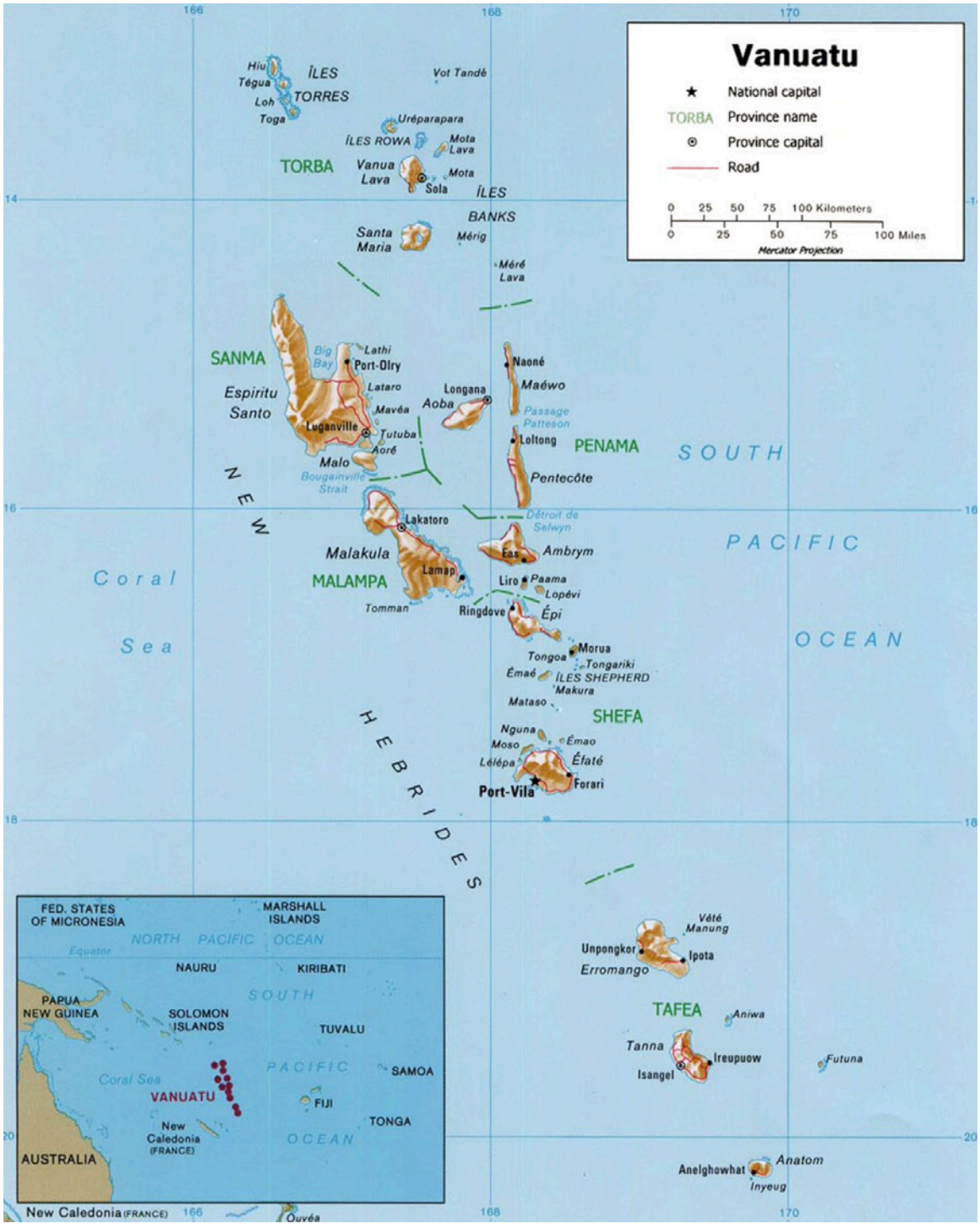
255. **Greater efforts are needed to ensure the efficient use of limited health resources to deliver maximum service outputs.** Investment of significant resources into hospitals with very low occupancy rates has led to large inefficiencies. A reallocation of resources towards other levels of health care may be considered. For instance, there is a need to strengthen and operationalize a multi-sectorial health policy to prevent and control NCDs. The strategy should focus on policy actions to change behavior as well as measures to strengthen primary health care services for the prevention and early detection of NCDs. Furthermore, resources may be reallocated to re-open health care facilities that are closed or damaged (due to natural disasters).

256. **There is a need to review and evaluate the entire human resource strategy.** While payroll and wages are the highest expenditure item for the Ministry of Health, human resource scarcity and the lack of adequate capacity continue to pose significant challenges for the health sector. There is therefore a need to improve workforce and succession planning, budgeting and remuneration, and training of health care workers. The monitoring of payroll expenditure needs to ensure that correct salaries and allowances are paid to staff. Payroll expenditure control may also free up resources that can be dedicated to operational expenditures, including medicine supply and equipment.

257. **Regional inequities in access to health services need to be addressed.** Poor human resource management and the impact of natural disasters have led to an uneven distribution in health worker density and access to health services. Therefore, the distribution of health workers across provinces and across types of facilities needs to be examined. While doing so, it will be important to maintain the right balance between non-clinical and clinical staff.

APPENDIX

Annex 1: Map of Vanuatu



Annex 2: Methodology fiscal sustainability and disasters

To generate the different debt-to-GDP paths, the nominal GDP series and total public debt series from the IMF's September 2020 DSA analysis were adjusted according to different disaster scenarios. The DSA analysis incorporated Lee et al. (2018) adjustments for the years 2026–30.

- To calculate the no-disaster debt path, yearly GDP growth for the period 2026–30 was increased with 0.5 percentage points. Public debt on the other hand was decreased with 0.32 percentage points for the period 2026–30.
- To calculate the historical disaster debt path, yearly growth was adjusted with 0.64 percentage points for the period 2020–30, while public debt was increased with 0.44 percentage points, corresponding to the Lee et al. estimates.
- To calculate the increased intensity-unchanged frequency debt path, yearly growth was adjusted with 0.85 percentage points for the period 2020–30, while public debt was increased with 1.01 percentage points. For this scenario, the regression coefficients of the impact of natural disasters were increased with one standard deviation.
- To calculate the increased intensity-increased frequency debt path, yearly growth was adjusted with 1.10 percentage points over the period 2020–30, while public debt was increased with 1.36 percentage points. For this scenario, the regression coefficients of the impact of natural disasters were increased with one standard deviation, while the probability to be struck by a severe natural disaster was increased from 0.294 to 0.394.

Table X-1: Macroeconomic assumptions in the DSA baseline

	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Real GDP growth	-8.3	4.3	3.9	3.3	3.2	3	2.7	2.6	2.6	2.5	2.5
Primary deficit	6.7	4.7	4.1	3.1	3.5	3.3	3.6	3.3	3.1	2.9	2.7
Inflation rate	1.8	2.2	2.1	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3

Source: IMF September 2020 Debt Sustainability Analysis for Vanuatu.

Table X-2: Various scenarios tested

		GDP	Debt	Impacted year
1	No disaster scenario	51.7	0.32	2026-2030
2	Historical scenario	53.7	-0.44	2020-2030
3	Increased intensity, unchanged frequency	54.4	-1.01	2020-2030
4	Increased intensity, increased frequency	55.1	-1.36	2020-2030

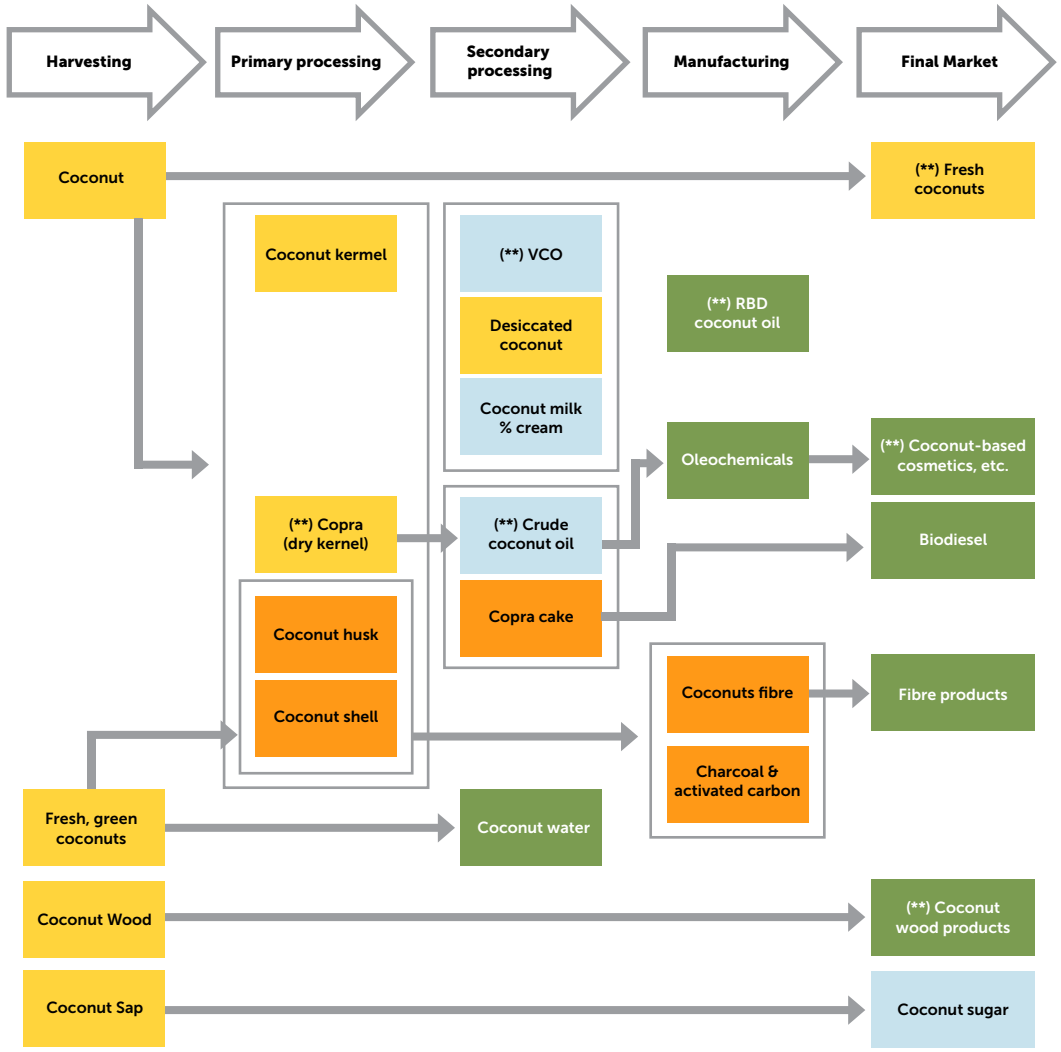
Source: Authors' own calculations.

Table X-3: Public debt trajectories (in percent of GDP) under different scenarios

Scenarios	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
1	48.6	51.7	53.3	54.5	56.0	57.5	58.9	60.2	61.3	62.2	62.7
2	49.7	53.7	55.7	57.3	59.2	61.2	63.7	65.8	67.7	69.4	70.8
3	50.4	54.4	56.6	58.3	60.3	62.4	65.0	67.3	69.3	71.2	72.8
4	50.9	55.1	57.4	59.3	61.5	63.8	66.6	69.1	71.4	73.5	75.3

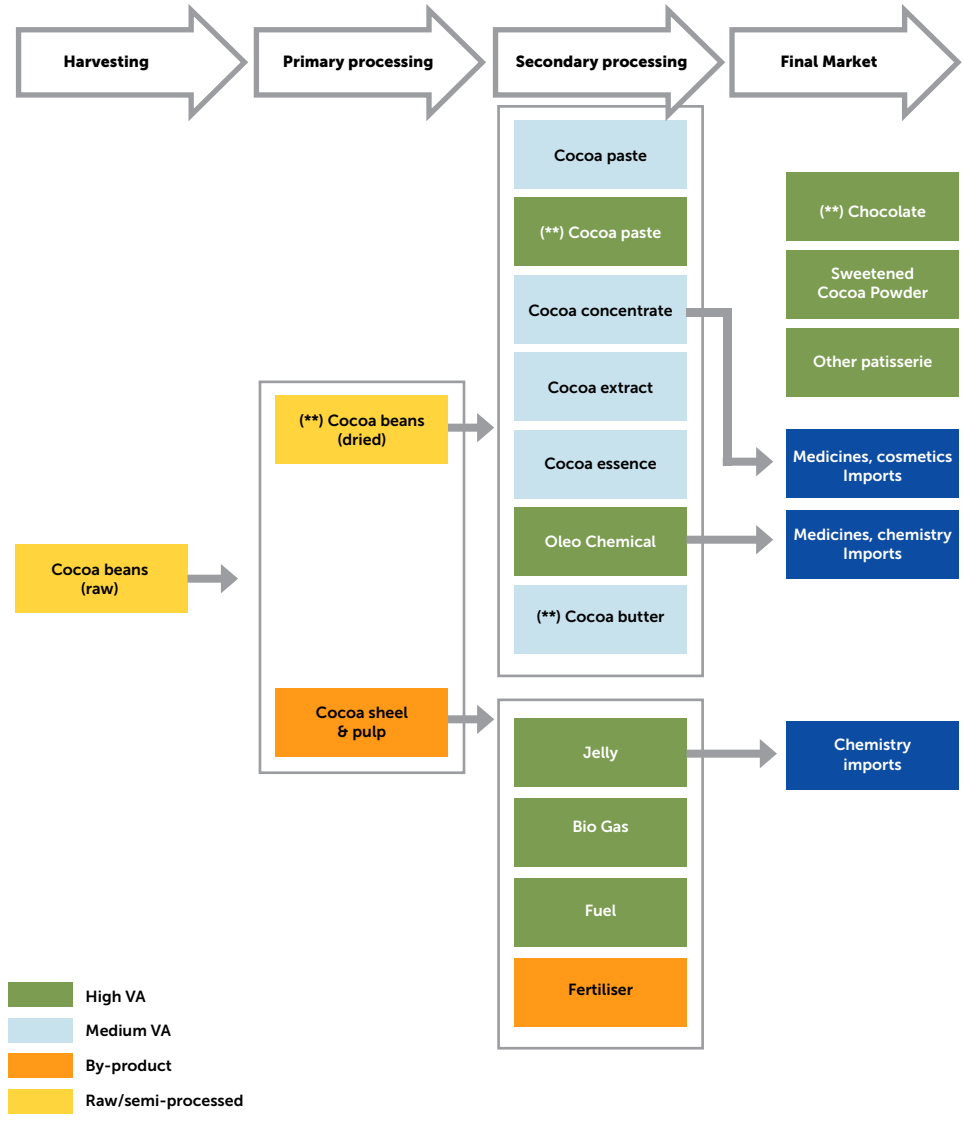
Source: Authors' own calculations.

Annex 3: Coconut product map



Note: (**) - indicates the product being currently exported by Vanuatu

Annex 4: Cocoa product map



Note: (**) - indicates the product being currently exported by Vanuatu

Annex 5: High-priority public investments in the post-COVID-19 context

Investment	Rationale	Estimated cost
EFATE		
Waste management / sanitation systems	Pollution of Vila harbor is a concern (danger to swimmers/water sports etc) and deterrent to further commercial developments in the Port Vila Bay area.	VT 1.03 billion (US$ 9.0 million)
SANTO		
WWII Museum	A potentially powerful anchor investment in Luganville (Vanuatu's second largest city) which could become the central focus point for visitors looking to see WWII sites on Santo; easily accessible attraction for cruise ship visitors and close to town center to attract visitors to spend time in town afterwards. Possible location for main Santo visitor information (VTO call) center.	VT 2.3 billion (US$ 20 million
Luganville wharf docking bollard enhancementst	Improved bollard capacity will help restore Santo's position as an attractive port of call for more and bigger ships.	VT 0.11 billion (US$ 1.0 million)
TANNA		
Upgrade of northern section of west coast road (Tanna Airport to Hebron village)	Help improve operating conditions for current top resorts and attract further investment; open access to cultural products and natural attractions (e.g. blue cave and others) and improve conditions in local communities and help them to link to hotels as suppliers.	VT 0.77 billion (US$ 6.7 million)
Upgrade of second half of cross-island road via Mt. Yasur volcano to east coast	Reduce travel time to volcano and enable more efficient tours to volcano; reduce time/cost of transport from west coast to accommodations and businesses on east coast, thus improving prospects for setting up new businesses/accommodations on east coast; and serve as potential alternative to building wharf/jetty on eastern coast (see below). Tanna has a large population with potential to get involved in tourism, but limited skills/ training. It is costly and difficult for Tanna's residents to access training in Efate.	VT 1.00 billion (US$ 8.7 million)
Tourism training facilities	Tanna has a large population with potential to get involved in tourism, but limited skills/training. It is costly and difficult for Tanna's residents to access training in Efate.	VT 0.23 billion (US$ 2.0 million)
Tanna Airport night lights and terminal upgrade	Night lights will enable extended operating hours, open the airport to additional flights, reduce safety risks for current and future visitors (particularly adventure travelers) by enabling 24-hour medivac services, and enable development of luxury products such as night time 'air taxi'/helicopter tours of Volcano.	VT 0.46 billion (US$ 4.0 million)
Lenakel town and market area re-development	Create a central shopping/dining/entertainment area for visitors outside of their hotels, leading to increased opportunities for community engagement in tourism and spending capture.	VT 0.11 billion (US$ 1.0 million)
Improved telecommunications	Unreliable and expensive access prevents many local operators from getting online bookings and limits their emergency communication abilities.	VT 0.69 billion (US$ 6.0 million)

Source: Vanuatu Tourism Investment Needs Assessment and Plan (2020–30)

Note: Relative to the investment prioritization at the time the Investment Plan was prepared (January 2020), investment projects highlighted in green are now assessed to be higher-priority in the aftermath of COVID-19, while those highlighted in orange are assessed to be lower priority; meanwhile, those highlighted in yellow were previously not on the above short list of high-priority projects but should now be added due to their renewed importance in the COVID-19 context.

REFERENCES

Alderman, H., Hoddinott, J., & Kinsey, B. 2006. Long-term Consequences of Early Childhood Malnutrition. Oxford Economic Papers. Vol.58 (3).

Asian Development Bank. 2014. Unlocking Finance for Growth Secured Transactions Reform in Pacific Island Economies. Manila. https://www.adb.org/sites/default/files/publication/42904/unlocking-finance-growth-pacific-island-economies.pdf [Accessed 23 Jan 2021].

Bailey, R. 2014. Working the Vines: seasonal migration, money, and development in New Zealand and Ambrym, Vanuatu. (Unpublished PhD Thesis). The University of Otago, Social Anthropology. Dunedin.

Bailey, R., & Ng Shui, R. 2016. New responses to natural disasters through seasonal labour mobility programs. State, Society and Governance in Melanesia. In Brief 2016/12. Canberra: Australian National University.

Bedford, C., Bedford, R., & Nunns, H. 2020. RSE Impact Study: Pacific stream report.

Bender, P., Dutcher, N., Klaus, D., Shore, J., & Tesar, C. 2005. In Their Own Language: Education for All. Education Notes. World Bank, Washington, D.C.

Benson, C. 2004. The importance of Mother Tongue based schooling for educational quality. Commissioned study for EFA Global Monitoring Report 2005. UNESCO, Paris.

Bowen, T., del Ninno, C., Andrews, C., Coll-Black, S., Gentilini, U., Johnson, K., Kawasoe, Y., Kryeziu, A., Maher, B., Williams, A. 2020. Adaptive Social Protection: Building Resilience to Shocks. International Development in Focus. Washington, D.C.: World Bank.

Cole, S., Waldron, S., & Quigley, S. 2019. Research opportunities for small-holder beef cattle systems in Pacific Island countries. A country report for ACIAR Project. The Vanuatu Beef Industry. LS/2018/102.

Cox, M., Alatoa, H., Kenni, L., Naupa, A., Rawlings, G., Soni, N., & Vatu, C. 2007. The Unfinished State Drivers of Change in Vanuatu, Australian Agency for Development. http://www.ausaid.gov.au/Publications/Documents/vanuatu_change.pdf [Accessed 7 March 2020].

Craven, L. 2015. Migration-affected change and vulnerability in rural Vanuatu. Asia Pacific Viewpoint 56(2): 223-236.

Craven, L., & Gartula, H. 2015. Conceptualising the Migration–Food Security Nexus: Lessons from Nepal and Vanuatu. Australian Geographer 46(4): 455-471.

Curtain, R. 2019. Proposals for a new Vanuatu labour mobility policy framework.

Curtain, R., & Howes, S. 2020. Governance of the Seasonal Worker Programme in Australia and sending countries. Canberra: Development Policy Centre, Australian National University.

Daily Post. 2019. Tariff increase for imported eggs. 24 September 2019. https://dailypost.vu/news/tariff-increase-for-imported-eggs/article_ef23ce80-de4c-11e9-ab92-0b331466b914.html [Accessed 22 Jan 2021].

DLA Piper. 2017. Renewable Energy in the Asia-Pacific. Edition 4, 2017.

Emanuel, K., A. 2013. Downscaling CMIP5 Climate Models Shows Increased Tropical Cyclone Activity over the 21st Century. Proceedings of the National Academy of Sciences of the United States of America.

European Union, 2015. Assessing Public Finance Management Eligibility. mimeo

FAO. 2014. Linking farmers to markets: Improving opportunities for locally produced food on domestic and tourist markets in Vanuatu A value chain study for chicken and fresh fruits Report on a study in Vanuatu. Food and Agriculture Organization Sub-regional Office for the Pacific Islands

FAO. 2019. Country Gender Assessment of Agriculture and the rural sector in Vanuatu. Port Vila

Fomby, T., Ikeda, Y., & Loayza, N., V. 2013. The Growth aftermath of Natural Disasters. Journal of Applied Econometrics, 28(3).

Government of Vanuatu. 2015. Vanuatu Food Security & Agriculture Cluster: CYCLONE PAM – Medium and Long-Term Recovery and Rehabilitation Strategy 2015-2017. Online resource. https://reliefweb.int/sites/reliefweb.int/files/resources/VUT_TC_Pam_2015_FSAC_FoodRec_plan_draft.pdf [Accessed 19 Mar 2020].

IFC. 2015. Vanuatu Agri-Tourism Linkages: A Baseline Study of Agri Demand from Port Vila's Hospitality Sector. https://www.dfat.gov.au/sites/default/files/vanuatu-agri-tourism-linkages.pdf [Accessed 3 March 2020].

IMF. 2016. Small States' Resilience to Natural Disasters and Climate Change—Role for the IMF, IMF Policy Papers, Washington: International Monetary Fund. Washington.

JICA. 2013. Data Collection Survey on Reverse Logistics in the Pacific Islands Final Report. Japan International Cooperation Agency (JICA).

Lee, D., Zhang, H., & Chau, N. 2018. The Economic Impact of Natural Disasters in Pacific Island Countries: Adaptation and Preparedness. IMF Working Paper WP/18/108.

Loayza, N., & Olaberria, E. 2012. Natural Disasters and Growth: Going Beyond the Averages. World Development. Vol 40(7).

Mackenzie-Reur, V.L., & Galgal, K.K. 2018. Building the Evidence Base on the Agriculture Nutrition Nexus: Vanuatu. CTA Working Paper 18/04.

Mansur, A., Doyle, J., & Ivaschencko, O. 2017. Cash transfers from disaster response: Lessons from tropical cyclone Winston. Development Policy Centre Discussion Paper 66, Crawford School of Public Policy, The Australian National University, Canberra.

McCaffrey, M. 2011. Financial Services Sector Assessment of Vanuatu. Pacific Financial Inclusion Program. http://www.pfip.org/wp-content/uploads/2017/02/Vanuatu-FSSA-Final-for-Print.pdf

McDonald, L. 2018. Household coping behavior and its contribution to resilience to global macroeconomic shocks in Vanuatu and Solomon Islands. Review of Development Economics, (4), 185.

McGregor, A., Watas, P., & Tora, L. 2009. The Vanuatu Organic Cocoa Growers Association (VOCGA): A Case Study of Agriculture for Growth in the Pacific, Food and Agricultural Organization. http://www.fao.org/docrep/013/am013e/am013e00.pdf

MNCC. 2012. Alternative Indicators of Well-being for Melanesia, Vanuatu Pilot Study Report. Malvatumauri National Council of Chiefs, Port Vila, Vanuatu.

Office of the Prime Minister. 2019. Stepping up Trade and Cultural Ties in the Pacific. Media release. 11 October 2019. Canberra. https://www.pm.gov.au/media/stepping-trade-and-cultural-ties-pacific [Accessed 13 Mar 2020].

Pacific–Australia Climate Change Science and Adaptation Planning Program. 2015. Current and Future Climate of Vanuatu.

Pelham, L., Clay, E., & Braunholz, T. 2011. Natural disasters: what is the role for social safety nets? SP Discussion Paper 1102. The World Bank, Washington D.C.

Republic of Vanuatu. 2015. Intended Nationally Determined Contribution (INDC). https://www4.unfccc.int/sites/ndcstaging/PublishedDocuments/Vanuatu%20First/VANUATU%20%20INDC%20UNFCCC%20Submission.pdf [Accessed 26 Jan 2021].

Republic of Vanuatu. 2019. Vanuatu Nationally Determined Contributions (NDC) Implementation Roadmap, March 2019. https://www.ndcs.undp.org/content/ndc-support-programme/en/home/impact-and-learning/library/vanuatu-ndc-implementation-roadmap.html [Accessed 26 Jan 2021].

Reserve Bank of Vanuatu. 2016. Financial services demand side survey, Vanuatu / Pacific Financial Inclusion Programme. Suva, Fiji: Pacific Financial Inclusion Programme, 2016. http://www.pfip.org/wp-content/uploads/2017/05/VANUATU-DSS.pdf

Reserve Bank of Vanuatu. 2017. Second Economic Symposium: Enhancing Financial Inclusion for a More Equitable, Inclusive and Sustainable Economic Development. Warwick - Le Lagon Resort. 17 May 2017.

Solomon Islands National Statistics Office. 2019. Report on the 2017 Solomon Islands National Agricultural Survey. Honiara.

Tiwok, S. 2018. Low-cost credit: The missing link to grow the productive and SME sectors. Daily Post. Opinion. 3 January 2018. https://dailypost.vu/opinion/low-cost-credit-the-missing-link-to-grow-the-productive-and-sme-sectors/article_4032f237-bf3f-5d2d-b85f-3d97b2c1b18d.html [Accessed 13 Mar 2020].

Tumbarello, P., Cabezon E., & Wu, Y. 2013. Are the Asia and Pacific Small States Different from Other Small States? IMF Working Paper 13/123. Washington D.C.: International Monetary Fund.

UNCTAD. 2020a. Harnessing Agricultural Trade for Sustainable Development: Vanuatu - Cocoa and Coconut (UNCTAD/DITC/TED/2019/1). United Nations Conference on Trade and Development, Geneva. https://unctad.org/system/files/official-document/ditcted2019d1_en.pdf [Accessed 12 January 2021].

UNCTAD. 2019. Indicators Explained #3 Export Product Concentration Index. UNCTADSTAT. UNCTAD/STAT/IE/2019/1. Geneva. https://unctadstat.unctad.org/EN/IndicatorsExplained/statie2019d1_en.pdf

UNCTAD. 2020b. Assessment of Organic Certification in The Coconut Oil Value Chain In Vanuatu Fostering The Development Of Green Exports Through Voluntary Sustainability Standards. United Nations Conference on Trade and Development. Geneva.

UNELCO. 2019. Copra for Electricity: Vanuatu's silver bullet to ensure its energy transition and sustainably improve the local social and economic conditions. Presentation to Vanuatu Renewable Energy Series. https://www.unelco.engie.com/images/doc/copra_oil_in_vanuatu_03.pdf [Accessed 26 Jan 2021].

World Bank. 2017. Pacific Possible: long-term economic opportunities and challenges for Pacific Island Countries (English). Pacific possible series Washington, D.C.: World Bank Group. http://documents.worldbank.org/curated/en/168951503668157320/Pacific-Possible-long-term-economic-opportunities-and-challenges-for-Pacific-Island-Countries [Accessed 19 Mar 2020].

World Bank. 2018. The Social Impacts of Seasonal Migration: Lessons from Australia's Seasonal Worker Programme for Pacific Islanders. Washington D.C.: World Bank.

World Bank. 2018. One Health: Operational Framework for Strengthening Human, Animal, and Environmental Public Health Systems at Their Interface. Washington, D.C.

World Risk Report. 2020. World Risk Report 2020. Focus: Forced Displacement and Migration. Rurh Universitat Bochum.

WTTC/Oxford Economics. 2020. Methodology. WTTC/Oxford Economics 2020 Travel and Tourism Economic Impact Research. May 2020.