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| Financing Pacific Governments for Pacific Development

PACIFIC POSSIBLE BACKGROUND PAPER NO.7.





Pacific Island countries face unique development challenges. They are far away from major markets, often with small populations spread across many islands and vast distances, and are at the forefront of climate change and its impacts. Because of this, much research has focused on the challenges and constraints faced by Pacific Island countries, and finding ways to respond to these.

This paper is one part of the Pacific Possible series, which takes a positive focus, looking at genuinely transformative opportunities that exist for Pacific Island countries over the next 25 years and identifies the region's biggest challenges that require urgent action.

Realizing these opportunities will often require collaboration not only between Pacific Island Governments, but also with neighbouring countries on the Pacific Rim. The findings presented in Pacific Possible will provide governments and policy-makers with specific insights into what each area could mean for the economy, for employment, for government income and spending.

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Abbreviations and Acronyms

ADB	Asian Development Bank
AHDI	Augmented Human Development Index
AIV	Article IV
Cat DDO	Catastrophe Deferred Drawdown Option
CIF	Consolidated Investment Fund
CoFA	Compact of Free Association
CPI	Consumer Price Index
CTF	Compact Trust Fund
DAC	Development Assistance Committee
DSA	Debt Sustainability Analysis
DRFI	Disaster Risk Financing and Insurance
EEZ	Exclusive Economic Zone
FSM	Federated States of Micronesia
GAO	Government Accountability Office
GDP	Gross Domestic Product
HDI	Human Development Index
ICT	Information and Communication Technology
IDA	International Development Association
IMF	International Monetary Fund
LNG	Liquefied Natural Gas
MAC-DSA	Market-Access Countries - Debt Sustainability Analysis
NCDs	Noncommunicable Diseases
ni-AHDI	non-income Augmented Human Development Index
ODA	Overseas Development Assistance
OECD	Organisation for Economic Co-operation and Development
PACER	Pacific Agreement on Closer Economic Relations
PBA	Program-Based Approach
PCRAFI	Pacific Catastrophe Risk Insurance
PICs	Pacific Island Countries
PITI-VITI	Pacific and Virgin Islands Training Initiatives
PFM	Public Financial Management
PMU	Project Management Unit
PNG	Papua New Guinea
PP	Pacific Possible
PRIF	Pacific Region Infrastructure Facility
RMI	Republic of the Marshall Islands
RERF	Revenue Equalization Reserve Fund
SISRI	Small Islands State Resilience Initiative
SWAp	Sector-Wide Approach
SWF	Sovereign Wealth Fund
TF	Trust Fund
TTF	Tuvalu Trust Fund
UN	United Nations
US	United States
USD	United States Dollar
WB	World Bank
WEO	World Economic Outlook

Executive Summary

The small Pacific Island Countries (PICs) face constraints which pose public financing challenges beyond those faced by other small island developing states. The PICs' unique geographic characteristics – smallness, remoteness, and internal dispersion – tend to give rise to structural gaps between domestic revenues and public expenditure. As a proportion of GDP, public spending is systematically higher in many PICs than in comparator countries, due in part to their inability to achieve economies of scale given their size and the scattered distribution of their populations, as well as the high cost of imported inputs. On the other hand, domestic government revenues as a proportion of GDP are generally more in line with other small states and countries at similar stages of development. As a result, there tends to be a persistent financing gap in most PICs. This gap is generally financed by some combination of grants from development partners, trust fund flows, resource-related revenues such as fishing license fees, and concessional or semi-concessional loans.

The PICs also face frequent natural disasters and climate-related impacts which have destructive effects on livelihoods and the capital stock. With annualized expected losses from natural disasters averaging around 2–3 per cent of GDP, the PICs lack the fiscal space required to self-insure or purchase full insurance against these events, and have instead been heavily reliant on donor finance in their aftermath. But the process of accessing finance from development partners after a disaster can be lengthy, difficult and uncertain, the resulting allocation of resources across projects and sectors may not be optimal, and the overall envelope of available finance is often insufficient to return the physical capital stock to its pre-disaster level.

This paper provides a quantitative assessment of the outlook for government finances in the PICs over the next 25 years. Section 2 assesses current public expenditure and revenue trends in the PICs and presents a range of scenarios for the evolution of government finances through to 2040. It also examines the levels of public spending that would be consistent with improved human development outcomes in the PICs, controlling for their remoteness and dispersion of their populations across islands. Section 3 examines longer-term prospects for meeting these financing needs, including via official development assistance, trust fund flows, and debt. The paper also assesses the potential for improvements in how PIC governments manage resource-related revenues and aid flows in their trust funds.

The paper also considers how the PICs' capacity to meet their financing needs will be affected by the extent to which they take advantage of the revenue- and growth-enhancing opportunities described in *Pacific Possible* (section 4). The findings suggest that even after accounting for these opportunities, aid will necessarily remain an important source of financing for PIC governments over the longer term. Given this, section 5 examines whether there is scope to improve the modalities, terms, and timing of aid to the Pacific, in line with principles of aid effectiveness.

Domestic revenues and expenditures

For most PICs, substantial further gains in revenue mobilization would require them to significantly outperform their peers. The baseline domestic revenue projections suggest that the scope for further substantial increases may be relatively modest in most cases, consistent with the fact that government revenues in most PICs (as a percentage of GDP) are already comparable with revenues in other small states and countries at similar stages of development. This implies that further revenue gains would require most PICs to impose higher taxes and collect more non-tax revenue than their counterparts. An exception is Vanuatu, which stands out as having had relatively low rates of domestic revenue mobilization, while in Tonga

domestic revenue has also (until recently) been lower than cross-country benchmarks. In these cases, the revenue projections – which see these countries more closely aligned with others in the region over the next 25 years – are more ambitious. Notably, Tonga has made substantial progress on this front in recent years, while Vanuatu is also considering steps to expand its domestic revenue take.

The baseline projections see expenditures declining from current levels (and historical average levels) for most of the PICs, but in some cases this would imply a substantial fiscal consolidation effort that may be hard to achieve. Government expenditures tend to be relatively high in the PICs, even compared with other small states. In part, this is because the public sector faces elevated import costs and is unable to take advantage of scale economies, and because of the important role of many PIC governments as direct providers of employment. At the same time, natural disasters periodically cause a substantial increase in spending needs associated with recovery and reconstruction. These factors mean government spending is often higher than small state averages, and can make fiscal consolidation relatively difficult.

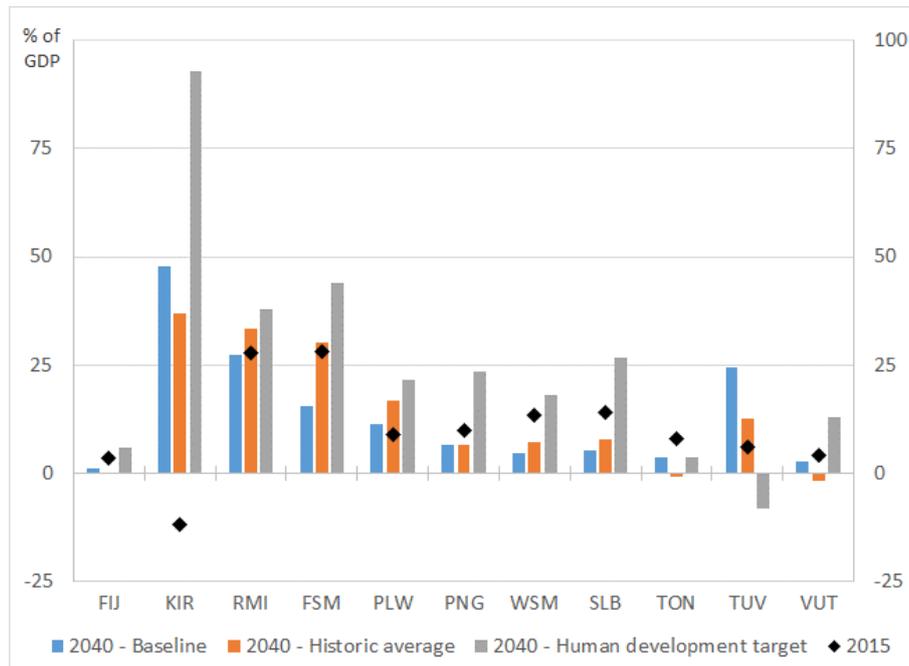
Despite high levels of government spending in the PICs, development outcomes in some cases are relatively weak, due in part to their remoteness and the dispersion of their small populations across many islands. A macro-level analysis suggests that after taking steps to account for these geographic constraints, the effectiveness of public spending in several PICs – as measured by the development outcomes associated with a given level of public spending per capita – is in line with or better than the developing small states average. Nevertheless, the analysis implies that some of these countries would need to spend more to attain a higher target level of human development, either because current per capita spending is relatively low, and/or because an additional ‘premium’ is required to offset the effects of geography.¹ An estimate of the required spending levels is captured in the ‘human development’ scenario for public expenditures. The analysis also suggests that there are a few PICs – in particular Vanuatu, Solomon Islands, and Papua New Guinea – in which the measured effectiveness of public spending is comparatively low. For these countries, improving spending effectiveness is the most critical step needed to boost development outcomes.

Combining the expenditure projections – the baseline scenario, a scenario based on historical average expenditure to GDP ratios, and the human development scenario described above – with the domestic revenue projections implies substantial domestic financing gaps in 2040 for many of the PICs. Under the baseline projections, these gaps would generally decline from current levels, but assuming expenditure levels in line with history or the human development scenario would mean that the financing gaps remain high or expand further in a number of cases (Figure I). Governments have several options for financing this gap. For example, they may draw on savings from previous surpluses or donor contributions that have been invested in trust funds; take advantage of foreign aid and concessional loans; or issue debt in domestic or global capital markets. Of course, they can also scale back their planned expenditures, but doing so may have adverse consequences given elevated development needs, and given levels of public spending effectiveness which are already comparable with or better than small state averages in several cases.

¹ This target is set in line with the small states average, for those countries currently below the small states average, and at the level of the best performing PIC (Tonga) for those countries already above the small states average (Fiji, Samoa, Tonga, and Palau).

Figure I: Projected domestic financing gaps in 2040 under various expenditure scenarios

Projected government expenditures less domestic revenues



Aid

These scenarios therefore suggest that there will be a continued need for aid across the Pacific over the next 25 years. While trust funds will also play a significant role in financing (and ideally stabilizing) PIC government expenditures, in most cases trust fund flows will be insufficient on their own to finance projected fiscal deficits. And most PICs already face elevated risks of debt distress and therefore have limited capacity to carry more debt. Nevertheless, the baseline projections reflect an expectation that current levels of aid to the PICs may not persist over the longer-term (three scenarios for aid flows are presented: a baseline scenario, a scenario in which development partners hold aid-to-GDP ratios constant, and a scenario in which development partners hold the real value of aid constant). This is despite the fact that in a number of cases, aid would actually need to increase from current levels, to maintain fiscal sustainability and/or finance the spending needed to improve development outcomes. For instance, the scheduled end of Compact grants in 2023 will have a significant adverse effect on the North Pacific economies, in the absence of alternative sources of financial assistance.

Aid in the Pacific should be viewed as an essential component of an ongoing collaboration between the PICs and development partners to fill structural financing gaps, not as a short or medium-term ‘intervention’. Such a perspective facilitates a more realistic assessment of the effectiveness of aid in the region – not as a magic bullet that will necessarily lead to pronounced improvements in development indicators over the short and medium-term, but rather, as an ongoing source of financing, policy advice and technical assistance that allows the basic operations and responsibilities of government to be adequately funded and delivered. Our analysis suggests that aid-financed spending is likely to be reasonably effective in many PICs, which achieve comparatively strong development outcomes given their level of public spending per capita (a relatively large proportion of which is financed by aid) and the geographic constraints that they face. Nevertheless, ongoing reliance on aid carries risks which it is important to minimize (see below).

Trust funds

While trust funds will also play a significant role in financing PIC government expenditures, current projections suggest they will not be sufficient to secure long-term fiscal sustainability in most cases. Moreover, for a number of PICs, contribution and withdrawal rules and procedures appear to be inconsistent with longer-term sustainability. In this paper, the operation of PIC trust funds is modelled under two different rules: a ‘status quo’ rule designed to reflect current operational procedures; and a ‘sustainable’ rule which prevents the real per capita value of a trust fund’s assets from falling below current levels. A comparison of outcomes under these two rules for each PIC shows that the structure of the Compact Trust Funds is not capital-protecting (in real terms), even though disbursements are intended to replace Compact grants in perpetuity in FSM and RMI. Annual withdrawals from Kiribati’s RERF trust fund continued until 2014, despite a pronounced decline in its real per capita value in the mid- to late-2000s, in part because the government avoided establishing formal rules pertaining to RERF contributions and withdrawals. In Tuvalu, on the other hand, the trust fund rules have been and continue to be effective in ensuring that the fund maintains its value in real terms.

In some cases there is scope to introduce capital-preserving rules and put measures in place to ensure compliance. There could also be benefits in strengthening contribution rules to improve the management of windfall revenues from fishing, tourism, and aid. In some countries, the recent upturn in these revenues has not prompted corresponding additional contributions to the trust funds, or reductions in debt. This in turn creates the potential for mismanagement of resource-related revenues (if they are saved) or procyclicality in public spending (if they are spent). Overall, experience in the Pacific suggests that trust funds are most effective when operational rules are simple, transparent, allow only limited discretion, and are supported politically and through robust governance structures.

The bottom line

The various scenarios for domestic revenues, donor grants, government expenditures, and trust fund flows presented in this paper can be combined to produce a set of projections of the overall fiscal balance for each of the PICs. These projected fiscal balances are set out in Figure II. The range of modelled fiscal trajectories is depicted in grey, and two specific trajectories are highlighted: i) the baseline fiscal balance, consistent with baseline revenues, expenditures and grants, and ii) the fiscal balance consistent with baseline revenues and grants and human development scenario expenditures. Fiscal projections for the countries with trust funds – Kiribati, Tuvalu, FSM, RMI, and Palau – assume that trust fund flows maintain the current real per capita value of the fund.

In Tonga, Samoa, and Fiji the baseline outlook appears to be broadly sustainable, but will depend on consistently prudent fiscal management, while achieving levels of public spending consistent with significant further improvements in human development outcomes would likely pose risks to fiscal sustainability in Samoa and Fiji. In Tonga, the baseline projections for revenues, expenditures and grants imply a budget that is close to balance, while the alternative aid and expenditure scenarios suggest some upside to this baseline. In Fiji and Samoa, reaching levels of public expenditure consistent with elevated human development targets would imply much larger deficits.

In Vanuatu, Solomon Islands, and Papua New Guinea, the distribution of projected fiscal outcomes is skewed toward larger budget deficits. In each case, development outcomes as measured by the HDI are well

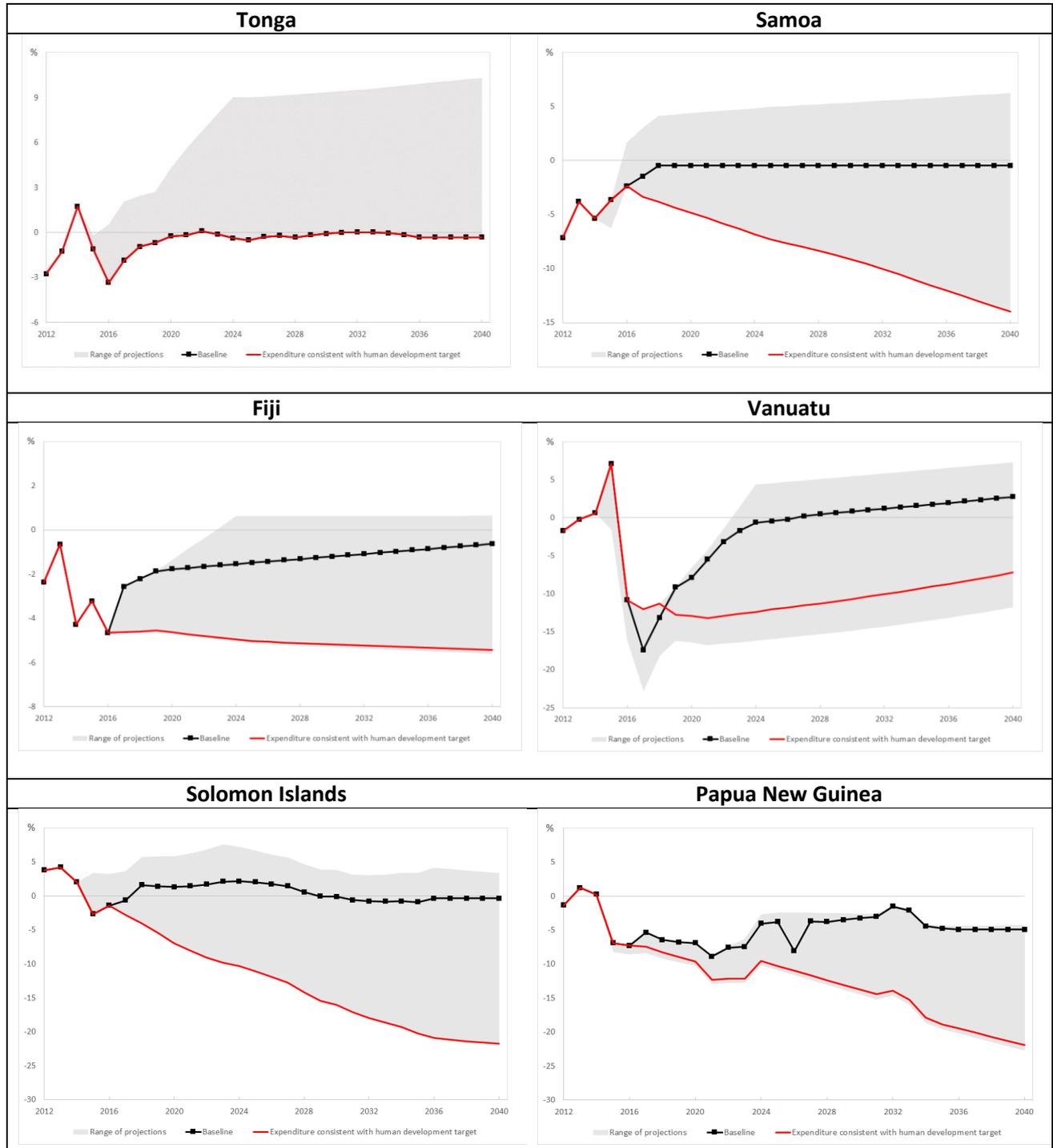
below small state (and PIC) averages, and the human development scenario implies the need for a pronounced increase in public spending relative to the baseline, even assuming substantial improvements in the quality and impact of public spending. Although the baseline projections for Vanuatu and Solomon Islands are consistent with a fiscal position close to balance, these projections are contingent on ambitious increases in domestic revenue mobilization in the case of Vanuatu, and continued resource-related inflows (around which there remains significant uncertainty) in the Solomon Islands. Moreover, most of the alternative scenarios in these countries, including the human development scenario for expenditures, imply unsustainable deficits over the longer term. In Papua New Guinea, even the baseline projections for spending and grants imply substantial deficits throughout the projection period. In both Papua New Guinea and the Solomon Islands, maintaining a sustainable fiscal position while simultaneously addressing substantial development needs will require efforts to ensure that the government acquires its fair share of resource revenues, while increasing the quality of its spending and the extent to which it gains from aid.

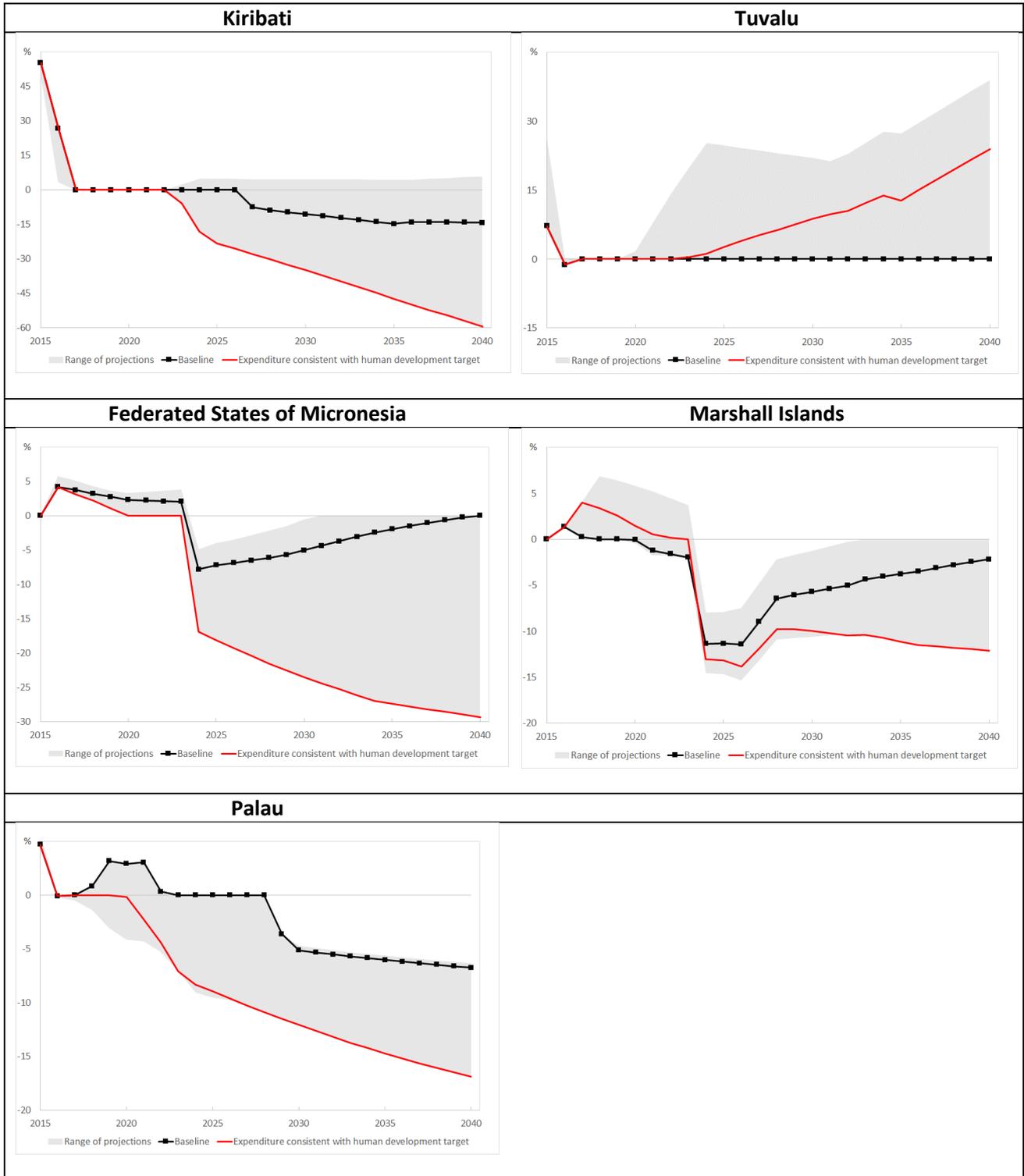
In Tuvalu and Kiribati, there is a wide range of possible fiscal outcomes, reflecting uncertainty around projections for aid, trust fund flows, and fishing license fees over the next 25 years. The analysis suggests that Kiribati will only be able to meet the financing needs implied by baseline projections for domestic revenues, grants, and spending if the real per capita value of the RERF declines. On the other hand, contingent on improvements to the quality of spending, a commitment on aid from development partners and sustained efforts on fishing revenues (see below) could allow Kiribati to sustain the higher levels of public spending needed to meet human development targets, despite the severe challenges it faces. In Tuvalu, the TTF and CIF can fully finance budget deficits in the baseline scenario and in all other scenarios, while increasing in real per capita value. Hence the long-term fiscal outlook is broadly positive, in part due to the sound financial management of the TTF to date. There is also considerable upside associated with fishing revenues and aid. Nevertheless, there is a clear need to focus on the quality and efficiency of public expenditure in Tuvalu, which may be a challenge given its particularly small size and geographic isolation.

The projections suggest that the scheduled end of Compact grants in 2023 will have a significant adverse effect on the North Pacific economies, in the absence of alternative sources of financial assistance. Without improvements to the growth outlook, a substantial increase in aid (relative to projected levels) would likely be needed to prevent the emergence of unsustainable budget deficits. While trust funds will play a significant role in financing government expenditures in these countries, trust funds alone cannot be relied upon to secure long-term fiscal sustainability. In FSM, use of its CTF to fully finance baseline fiscal gaps over the next 25 years would lead to a decline in the real per capita value of the fund. In RMI and Palau the situation is even more tenuous: the respective CTFs are unlikely to be able to finance baseline fiscal gaps in either country over the period to 2040, and the spending required to improve human development outcomes would likely create even greater fiscal pressures.

Figure II: Projected fiscal balances (after grants and trust fund flows) as a % of GDP

Note: The black line denotes the fiscal balance consistent with baseline revenues, expenditures, and grants, and the red line denotes the fiscal balance consistent with baseline revenue, baseline grants, and human development scenario expenditures. The grey region represents the envelope of fiscal outcomes arising from all scenario combinations. Fiscal projections for the trust fund countries – Kiribati, Tuvalu, FSM, RMI, and Palau – incorporate trust fund flows that are consistent with maintenance of the current real per capita value of the trust fund.





Debt

The baseline projections suggest that in the absence of concerted efforts to increase aid, boost domestic revenues, or curtail spending, contracting new debt would be the only available option to several PICs to close emerging financing gaps over the next 25 years. For PICs seeking to expand their public spending to levels consistent with the achievement of improved human development targets, the implications for debt accumulation would be significantly greater.

However, for the PICs at a high risk of debt distress, additional borrowing even on concessional terms may be ill-advised. By definition, these countries already have debt at levels which are consistent with a material probability of debt distress and default, and which may put the sustainability of trust funds at risk. Unfortunately, many of the countries rated at a high risk of debt distress are also those where the financing needs are greatest.

For those PICs at a moderate risk of debt distress, there may be scope for some additional debt, but as a general rule borrowing should only be on concessional terms. Even borrowing on soft terms may be problematic for countries rated at a moderate risk of debt distress, in part because standard debt sustainability analyses (DSAs) may not adequately capture risks to the PICs. In particular, the PICs' vulnerability to natural disasters and other external shocks would tend to imply that they will generally be more vulnerable to debt distress than a country that has a similar macroeconomic outlook but faces a more stable external environment.² A cautious approach to public borrowing is also advisable given many investment proposals are likely to have relatively low economic returns, consistent with the generally modest potential growth rates in the PICs.

To take advantage of investment opportunities while maintaining aggregate debt sustainability, it is important that the PICs have robust rules around the contracting of new debt. In PICs such as Vanuatu, the Solomon Islands, and Papua New Guinea – where the risk of debt distress is more moderate, the outlook for growth is relatively strong, and development needs are greater – modest increases in debt-funded capital spending may be justified. But governments should have systems in place to effectively identify and prioritize public investment projects, confirm that debt-funded investments are likely to yield a positive economic return, and ensure value-for-money in procurement and design.

Development partners could also do more to be flexible with the financing terms they provide, and to maximize the effectiveness of their development assistance. This would assist the PICs in their efforts to maintain fiscal sustainability and encourage them to make full use of available concessional financing before turning to non-concessional sources.

The opportunity of Pacific Possible

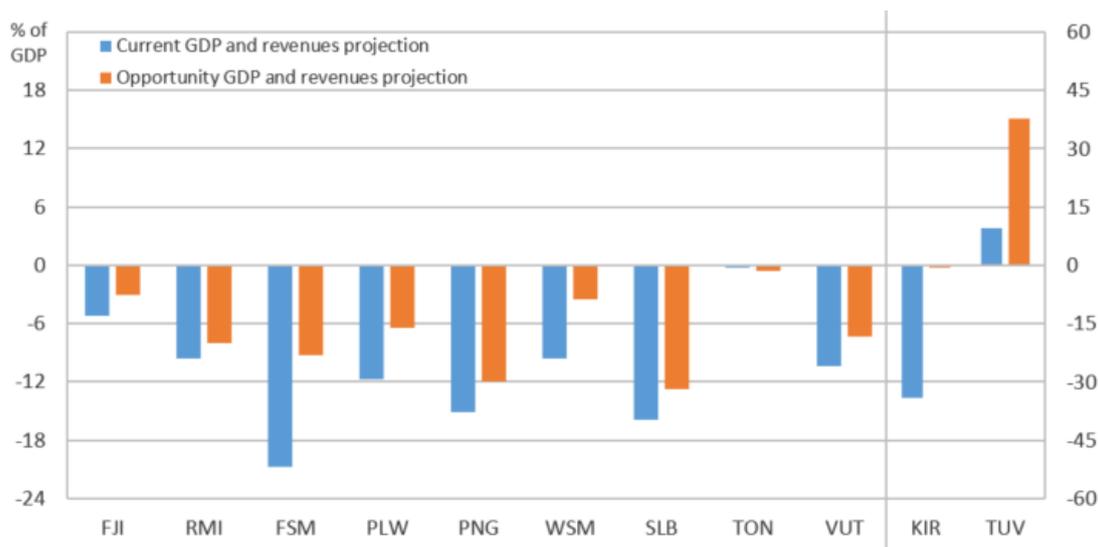
***Pacific Possible (PP)* examines the economic impacts of transformative opportunities in several areas – including tourism, fisheries, labor mobility, and the knowledge economy – each of which would affect long-run growth and fiscal outcomes in the PICs.** In particular, it examines how increases in income associated with *PP* interventions would expand PIC revenues, and specifically considers the effect of opportunities in fisheries, which would directly increase the fishing license fees accruing to PIC governments. The countries with the greatest potential for revenue increases are those standing to gain the most from fisheries interventions, namely Kiribati, FSM and Tuvalu. *PP* interventions could also boost real revenues substantially in other countries, including Fiji, Samoa, Tonga, and Palau, due mainly to the potential impact of these interventions on economic growth and the revenue base.

By increasing PIC revenues, the *PP* interventions can potentially help PIC governments to finance the increases in public expenditure necessary to deliver critical social services and drive improved human

² More recent DSAs – including in Samoa and the Solomon Islands – have attempted to account for the average annual effect of natural disasters and climate change on growth and fiscal balances in estimating the risk of debt distress.

development outcomes. However, the projections suggest that achieving public spending levels consistent with the human development targets is likely to remain difficult in the North Pacific countries and in Papua New Guinea, Solomon Islands, and Vanuatu, even assuming *PP* growth and revenue dividends (Figure III). As a result, additional measures to increase domestic revenues and/or aid may be required in these countries over the next 25 years. In addition to increasing the quantity of spending, measures to improve the quality of public spending will be of critical importance in several PICs.

Figure III: Projected fiscal balances as a share of GDP (2021-40 average) assuming human development scenario expenditures*



*Note that the human development target is set at the developing small states average for all PICs except for Fiji, Samoa, Tonga, and Palau, which have a higher target. The projections of the fiscal balance draw on baseline aid projections and assume (for those countries that have trust funds) that the real per capita value of trust fund assets remains constant.

Aid effectiveness

Given the specific structural constraints to growth faced by many of the PICs, the positive effects of aid are more likely to be reflected in overall macroeconomic stability and the continued funding of public services than in faster economic growth per se. The fact that several PICs appear to achieve comparatively strong development outcomes given their geography and level of public spending per capita – a relatively large proportion of which is financed by aid – suggests that at least from the macro perspective aid-financed spending can be viewed reasonably effective in a number of Pacific countries.

For those PICs with stronger capacity, budget support aligns closely with aid effectiveness principles and is a modality that should continue to be encouraged in the Pacific. At its best, general budget support has the potential to facilitate coordination among development partners and reduce the negative impacts of fragmentation, while enhancing government ownership of policy reforms and promoting the alignment of aid with national priorities. But results from budget support operations can sometimes be unconvincing, and measures to incentivize the implementation of supported policy reforms may be as or more important as the reforms themselves. Sector budget support can be appropriate in engagements with a technical and clearly defined focus, but it is important to ensure whole-of-government support for supported reforms.

Given pronounced infrastructure deficits, project aid has and should continue to play an important role in the PICs. Given thin and stretched capacity in PIC government ministries and agencies, continued efforts are

needed to reduce transaction costs, and projects should aim to build the institutional capacity of client governments where possible. To the extent possible, individual projects should be coordinated between development partners and consistent with the national objectives of the recipient country. There is also scope for further use of regional approaches in the Pacific, to reduce fixed costs and the impact of capacity constraints. To support national planning mechanisms, project aid flows should be as predictable as possible in 'normal' times and responsive to external shocks and natural disasters when they strike.

Further efforts from both PIC governments and development partners are needed to reduce the fragmentation of projects and financing sources. While there have been some efforts toward harmonization – e.g. by using several sources of funding to finance a single project using a single project management unit and set of procedures – donor fragmentation remains a source of inefficiency. It implies higher transactions costs for governments, who are required to deal with more reporting requirements, more variation in donor rules and procedures, and more donor missions. It may also undermine domestic bureaucratic capacity, and reduce the stake of individual donors in overall country outcomes, leading to less strategic approaches to aid delivery. Fragmentation is of particular concern when it comes to financing for climate change adaptation and risk reduction investments, which is currently provided from a range of sources and donors.

With respect to the provision of technical assistance, in many cases non-traditional approaches may lead to more sustainable impacts in the Pacific context. Capacity supplementation may be more effective than capacity building in some specialized areas. Technical assistance is also likely to be more effective to the extent that it is problem-based, aligned with government demand and priorities, and closely-integrated with other aid modalities.

Aid should be treated as an important component of PICs' overall strategies for financing the recovery and reconstruction requirements associated with natural disasters. These strategies should reflect both time and cost dimensions, ensuring that the volume of funding available at different stages of the response matches actual needs in a cost-efficient manner. Aid may impose few direct financial costs but its availability can be uncertain and it often takes some time to arrive after a disaster. Other financing instruments can be activated more rapidly (self-insurance, parametric insurance, contingent credit) but are generally costlier. Because the specific costs and benefits associated with each of these mechanisms will vary across countries, the appropriate mix of these instruments needs to be considered on a case-by-case basis. As a general rule, development partners should attempt to simplify the suite of available financing instruments and provide a clear rationale for each.

Ex-post development partner financing is likely to remain the major source of finance for longer-term reconstruction efforts in the Pacific, and hence there is a need to address the common critiques of post-disaster aid delivery. Delays and uncertainty in the provision of aid after a disaster can be costly in terms of social and economic welfare. To the extent possible, measures should therefore be taken ex ante to reduce the likelihood of delay ex post. As with all aid, coordination across donors and close alignment with government plans and priorities is critical in the aftermath of a natural disaster.

For PICs with stronger capacity, it may make sense for development partners to allocate more aid toward subsidizing insurance or other contingent finance mechanisms. These could allow PIC governments more control over post-disaster spending and incentivize their proactive management of disaster risks. Where possible, these schemes should be designed so that the 'crowding out' of existing aid is minimized.

To ensure the appropriate level of investment in resilience-building activities, PIC governments and development partners need to work together to boost the accessibility of the various climate funds, and reduce the fragmentation of projects and financing sources. PIC governments should aim to define prioritized investment plans and use them to screen project proposals and marshal additional funds where necessary. Development partners may need to adjust their existing programs in favor of a more coordinated approach, including through the joint financing of priority projects.

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1. Introduction

The small Pacific Island Countries (PICs) face unique constraints which pose public financing challenges beyond those faced by other small island developing states. In particular, the PICs' geographic characteristics – smallness, remoteness, and internal dispersion – make structural financing gaps much more likely for many PIC governments. As a proportion of GDP, public expenditures are systematically higher in many PICs than in comparator countries, due in part to their inability to achieve economies of scale given their size and the scattered distribution of their populations, as well as the high cost of imported inputs. On the other hand, domestic government revenues as a proportion of GDP are generally more in line with other small states and countries at similar stages of development. As a result, there tends to be a persistent gap between domestic revenues and expenditures in a number of PICs. This gap is generally financed by some combination of grants from development partners, trust fund flows, resource-related revenues such as fishing license fees, and concessional or semi-concessional loans. To the extent that improved public service provision and human development outcomes imply a need for government spending above current levels, the financing gap in many PICs is greater again.

The PICs also face frequent natural disasters and climate-related impacts which have destructive effects on livelihoods and the capital stock. With annualized expected losses from natural disasters averaging around 2–3 per cent of GDP³, the PICs lack the fiscal space required to self-insure or purchase full insurance against these events, and have instead been heavily reliant on donor finance in their aftermath. Further compounding these challenges, the process of accessing finance from development partners after a disaster can be lengthy, difficult and uncertain, the resulting allocation of resources across projects and sectors may not be optimal, and the overall envelope of available finance is often insufficient to return the physical capital stock to its pre-disaster level.

This paper provides a quantitative assessment of the outlook for government finances in the PICs over the next 25 years. Section 2 assesses current public expenditure and revenue trends in the PICs and presents a range of scenarios for the evolution of government finances through to 2040 (see *Box 1: The scenarios modeled by this paper*). It also examines the levels of public spending that would be consistent with improved development outcomes in the PICs, controlling for their remoteness and dispersion of their populations across islands. Section 3 examines longer-term prospects for meeting these financing needs, including via official development assistance, trust fund flows, and debt. The paper also assesses the potential for improvements in how PIC governments manage and use resource-related revenues and aid flows in their trust funds. While a detailed treatment of private sector investment is beyond the scope of this paper, in some PICs there will also be scope to leverage private sources of funding (through privatizations, public private partnerships, or otherwise) to reduce the burden on public finances: such arrangements are likely to be beneficial in a number of cases, although the geographic constraints outlined above may make it more difficult for many PIC investment projects to generate a risk-adjusted rate of return sufficient to attract commercial financing.⁴

³ Cabezon et al. (2015a), *Enhancing Macroeconomic Resilience to Natural Disasters and Climate Change in the Small States of the Pacific*, WP/15/125.

⁴ The starting point for investment decisions under the new Maximizing Finance for Development decision-making approach is that if a development project can be financed on commercial terms while remaining affordable and offering value for money, then that investment should not be a priority for concessional or public financing. Otherwise, policy reforms (to reduce perceived risks or market failures), targeted government subsidies, or the use of concessional resources in risk-sharing arrangements should also be explored.

Section 4 considers how the PICs' capacity to meet their financing needs will be affected by the extent to which they take advantage of the revenue- and growth-enhancing opportunities described in the other *Pacific Possible* background papers.

The findings suggest that aid will necessarily remain an important source of finance for PIC governments over the longer term. In light of agreed principles of aid effectiveness, Section 5 examines whether there is scope to improve the modalities, terms, and timing of aid delivery, including in response to natural disasters. Other disaster risk financing instruments, such as self-insurance, parametric insurance and contingent credit, are also considered as part of PICs' overall strategies for financing their recovery needs. Particular attention is paid to the need to reduce the negative impacts of aid fragmentation and ensure that the support provided by various donors is well-coordinated.

As one of the five cross-cutting issues of *Pacific Possible*, promoting regional cooperation – which encompasses collaboration with development partners, as well as cooperation among the PICs themselves – is central to enhancing living standards in the Pacific. Development assistance currently plays a key role in supporting public service delivery in the Pacific, and this role is likely to remain important over the next 25 years: working together to ensure that aid is provided as efficiently as possible is therefore of paramount importance. Due to the region's high and increasing exposure to external shocks, the development of more effective financial risk management instruments will also be critical. This paper examines each of these areas of financial collaboration.

Box 1: The scenarios modeled by this paper

This paper considers possible trajectories for fiscal flows through to 2040. Specific scenarios for domestic revenues, public expenditures, and donor grants are independently modelled. Combining these scenarios generates a set of trajectories for the fiscal balance. For countries with established trust funds, these fiscal trajectories are then used to calculate how the trust funds would accumulate assets (in the event of surpluses) or disburse to finance the budget (in the event of deficits). The residual fiscal balance (or financing gap) once these trust fund flows have been accounted for is also modelled.

The starting point of this exercise is the selection of a 'baseline' trajectory for key fiscal flows and overall economic growth, in line with current projections for each of the PICs, as specified in recent IMF-World Bank Debt Sustainability Analyses (DSAs). These take into consideration available country data and forecasts as well as in-country discussions with the government and other stakeholders. Note that while they are termed 'baseline' projections, in many cases they are quite ambitious in terms of their assumptions around the PICs' capacity to mobilize domestic revenue and achieve fiscal consolidation via expenditure restraint.

For each PIC, the following scenarios for fiscal flows are presented in Sections 2 and 3:

Domestic revenues

- Baseline revenue-to-GDP projections from the DSA, which generally see PICs' domestic revenues moving toward cross-country averages, controlling for income (the exception is Vanuatu, where an upwards adjustment to the DSA revenue projections has been made).

Public expenditures:

- Baseline expenditure-to-GDP projections from the DSA
- Expenditure-to-GDP maintained at its (fifteen-year) historical average
- Expenditure calibrated to meet a human development target (as explained in Section 2)

Donor grants:

- Baseline grant projections from the DSA
- Donor grant-to-GDP ratios held constant
- Donor grants held constant in real terms

Trust fund projections are contingent on the fiscal balances that arise from the public expenditure, domestic revenue and aid scenarios. The operation of PIC trust funds is modelled under two different rules: a 'status quo' rule designed to reflect current operational procedures; and a 'sustainable' rule which prevents the real per capita value of a trust fund's assets from falling below current levels.

In Section 4, the growth and revenue enhancing effects of *Pacific Possible* opportunities are incorporated into the analysis. Specifically, the income and public revenue impacts of opportunities in labor mobility, fisheries, tourism and ICT are modelled and their impact on the PICs' ability to meet their public expenditure needs is assessed.

2. Domestic revenues and expenditures

Fiscal sustainability depends on a government's level of public expenditure and its ability to generate revenues. This section considers recent trends in these flows in the PICs and outlines a set of scenarios for how they might evolve over the next 25 years.

Government revenues as a proportion of GDP in the PICs are comparable with revenues in other small states and in countries at similar stages of development. The notable exceptions are Kiribati and Tuvalu, where revenues are higher and more volatile given the importance of fishing license fees. While revenues in 2040 for most PICs are projected to remain around current levels in the baseline scenario, revenues are expected to decline as a proportion of GDP in Kiribati and Tuvalu, although changes to the management of fisheries resources could offset these declines (see section 4).

On the other hand, public expenditure tends to be relatively high in the PICs. This is in large part because the public sector, which is the main provider of goods and services in many of the PICs, faces elevated import costs and is typically unable to take advantage of scale economies. Government spending also acts as an important means of directly creating employment in many of the smaller PICs, including through state-owned enterprises, which elevates the public wage bill in some cases. At the same time, capital losses resulting from natural disasters periodically cause a substantial increase in public investment needs. The baseline scenario for public expenditures sees expenditures declining from current levels for several PICs, but this would imply a substantial fiscal consolidation effort for some.

Despite high levels of government spending in the PICs, development outcomes in some cases are relatively weak, due in part to their remoteness and the dispersion of their small populations across islands. A macro-level analysis suggests that after controlling for these geographic constraints, the effectiveness of public spending in several PICs – as measured by the development outcomes associated with a given level of public spending per capita – is in line with or better than the developing small states average. Nevertheless, the analysis implies that some of these countries would need to spend more to attain human development outcomes in line with developing small state averages, because current per capita spending is relatively low, and/or because an additional 'premium' is required to offset the effects of geography. The analysis also suggests that there are a few PICs – in particular Vanuatu, Solomon Islands, and Papua New Guinea – in which the measured effectiveness of public spending is comparatively low. For these countries, improving spending effectiveness is the most critical step needed to improve development outcomes.

Combining the scenarios for domestic revenues and expenditures implies substantial domestic financing gaps in 2040 for many of the PICs. Under the baseline projections, these gaps would decline from current levels, but assuming expenditure levels in line with history or as determined under the human development scenario would mean that the financing gaps remain high or expand further in a number of cases.

a. Revenues

As a proportion of GDP, government revenues in most PICs are comparable with revenues in other small states and countries at similar stages of development. However, revenues are significantly higher than average in Tuvalu, Kiribati, and the Solomon Islands, due largely to the important role of resource-related revenues in these countries (see below). Vanuatu, on the other hand, stands out as having had particularly low rates of domestic revenue mobilization, while in Tonga and the Marshall Islands domestic revenue has

also been slightly lower than cross-country benchmarks⁵ (Figure 1). Revenue volatility in most small PICs tends to be broadly in line with revenue volatility in other small states, although fishing license fees have fluctuated substantially in Kiribati and Tuvalu over the last two decades (Figure 2).

Figure 1: Average domestic revenue-to-GDP ratio, 2010-2014

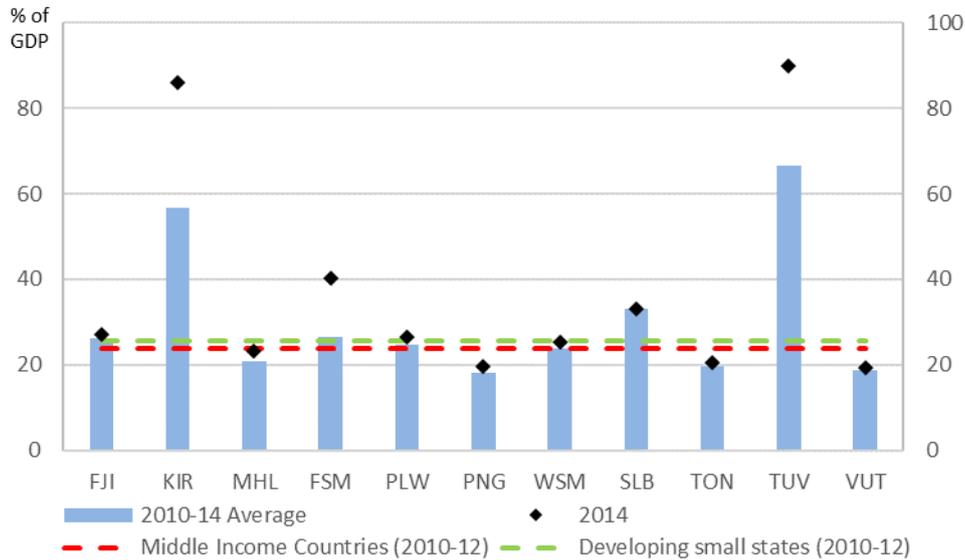
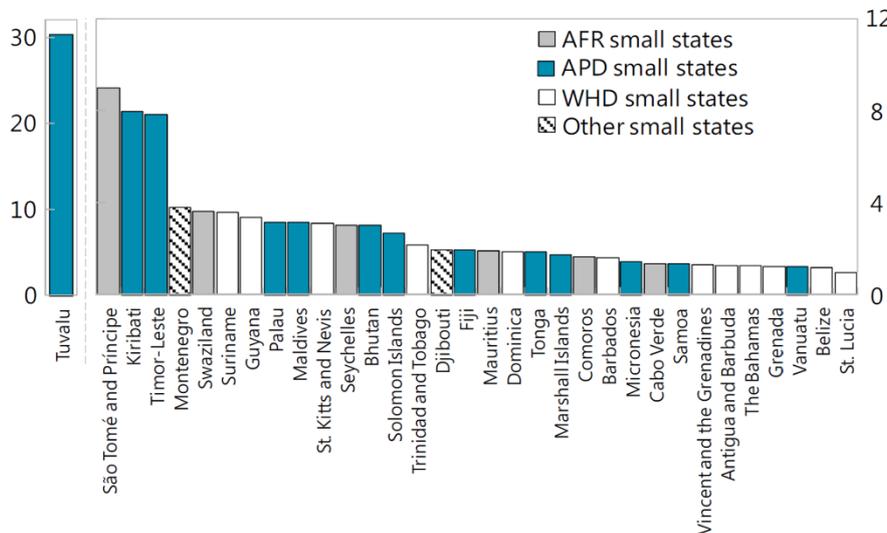


Figure 2: Standard deviation of detrended revenue-to-GDP ratio, 1990-2013⁶ (% of GDP)



The PICs tend to have relatively high rates of tax collection, with the tax mix generally weighted toward import taxes and indirect taxes, reflecting their dependence on imported goods for consumption and investment (Figure 3). In RMI and FSM, however, taxes on income, profits and capital gains are the largest

⁵ In Tonga, more recent estimates indicate that domestic revenues have increased to 23.7 percent of GDP in FY2016.

⁶ Excludes a time trend in the underlying ratio. Reproduced from Cabezon et al (2015b), *Strengthening Fiscal Frameworks and Improving the Spending Mix in Small States*, IMF Working Paper WP/15/124.

components of government tax revenues. Vanuatu is notable both for its low overall domestic revenues and for its dependence on value added tax.

Figure 3: PICs' tax mix



Resource-related flows are also important contributors to public revenues in several PICs. For instance, fishing license fees now represent around half of total revenues in Kiribati and Tuvalu, after rising rapidly in recent years due in large part to the introduction of the Vessel Day Scheme⁷. Logging is a major contributor to revenue in the Solomon Islands, and revenues from mining and LNG have accounted on average for around 20 percent of total revenue in Papua New Guinea over the past decade. In these countries, revenues can be highly sensitive to fluctuations in commodity prices and other external shocks, as is most clearly evidenced by the pronounced effect of recent declines in oil and LNG prices on the PNG budget.

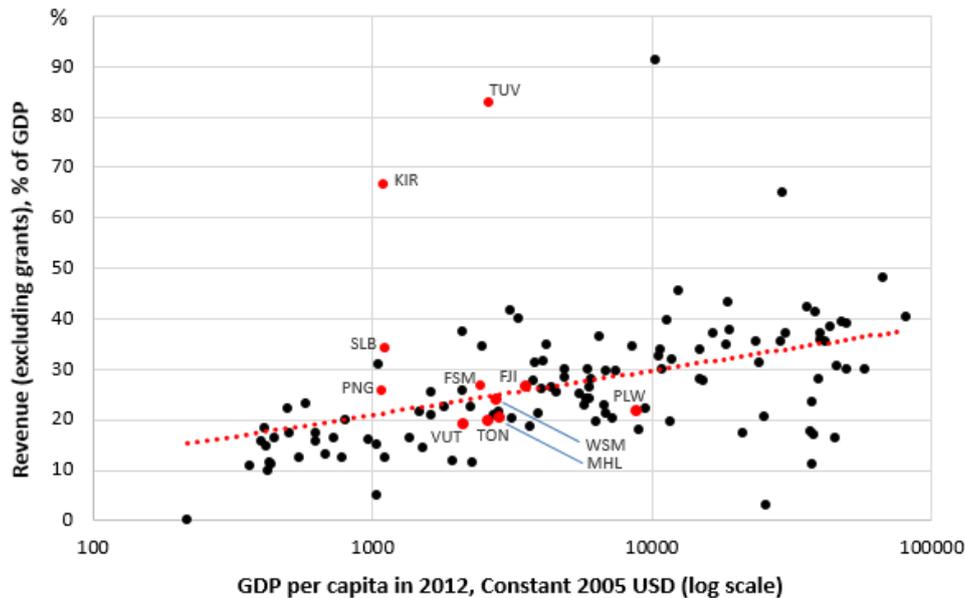
Overall, the evidence suggests that most PICs perform relatively well in terms of domestic revenue collection, although there is scope for some further progress. As higher-income economies with stronger government capacity tend to exhibit higher levels of domestic resource mobilization, there is the potential for further modest increases over time as the PICs develop (Figure 4). In some cases, there may be scope to raise more revenue from income taxes – which are currently relatively low in most PICs – at a limited efficiency cost. A number of the PICs also have reform programs in place which target increased revenue collection, including in Tonga, where domestic revenue has increased by almost 6 percentage points of GDP over the four years to FY2016, and in Samoa, where regulatory and administrative reforms have improved tax compliance while at the same time easing the burden of compliance.

Nevertheless, as most PICs already have revenue levels in line with cross-country benchmarks, the scope for substantial further gains would require the PICs to significantly outperform their comparators. The baseline revenue projections through to 2040 suggest that further substantial increases are unlikely for most PICs, and that revenues are likely to decline somewhat from their recent exceptional levels in Tuvalu and

⁷ The current purse-seine vessel day scheme agreed in 2009 by the Parties to the Nauru Agreement (PNA) works similarly to a 'cap-and-trade' scheme for fishing. Each year the PNA countries set the total catch limit needed to maintain a healthy fish stock, and translate that catch limit into individual vessel fishing days, which are allocated to and sold by individual countries.

Kiribati. Recent PACER Plus trade negotiations – which promote greater trade integration between several Pacific countries and New Zealand and Australia – may also reduce the scope of many PICs to generate tariff revenue over the longer term. On the other hand, there are a range of opportunities to improve fisheries management in the PICs identified in the *Pacific Possible Tuna Fisheries* paper which could yield pronounced revenue gains relative to the baseline (see section 4).

Figure 4: Revenue mobilization has a positive relationship with income



i. Baseline Projections

The baseline revenue projections are generally consistent with a ‘reversion to the mean’ (Figure 5 and Figure 6). These long-term projections have been drawn from recent joint IMF/World Bank Debt Sustainability Analyses for each country. In all PICs apart from Vanuatu, the DSA projections are consistent with a movement toward cross-country average rates of domestic revenue mobilization, after controlling for income. For Vanuatu, an upward adjustment is made to the DSA projections to allow for more ambitious improvements in revenue collection (from very low levels currently), so that revenue levels become more in line with cross-country averages.⁸ The projections anticipate a decline in revenues in those PICs where they have recently been highest, namely Kiribati, Tuvalu, and the Solomon Islands. The decline in revenues is expected to be most severe in Kiribati and Tuvalu, mainly driven by moderation in the assumed level of fishing license fees. But to the extent that the increases in fishing license fees observed to date have been predominantly due to structural factors which are likely to persist, these baseline projections for Tuvalu and Kiribati may be conservative (see section 4 for more details). In most of the remaining countries, revenues are projected to increase, broadly in line with the cross-country relationship between revenues and income (Figure 6).

⁸ The DSA projections hold Vanuatu’s revenue-to-GDP ratio broadly constant over the next 25 years.

Figure 5: Domestic revenue projections

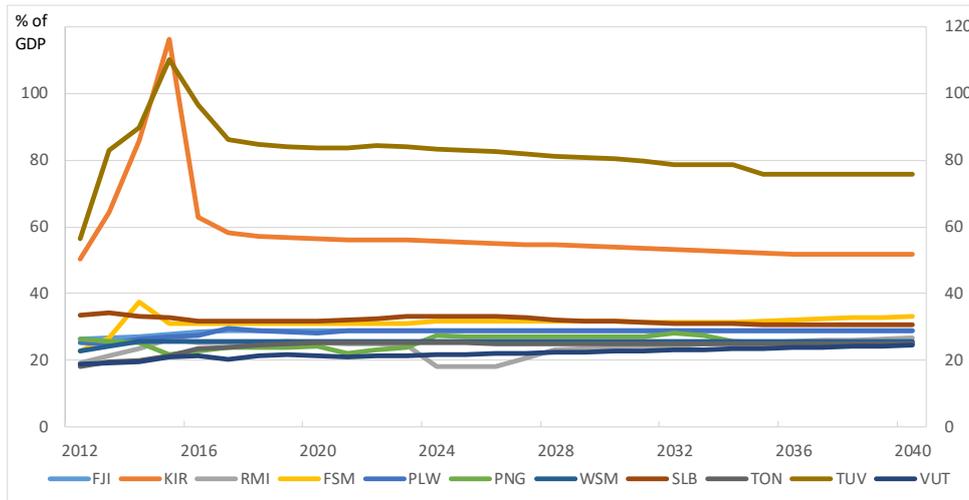
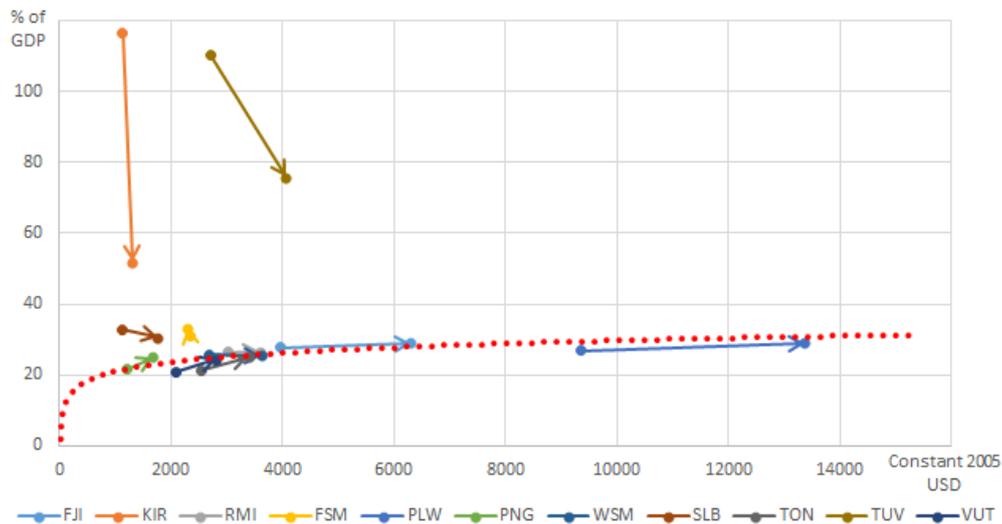


Figure 6: Domestic revenue and GDP per capita projections: 2015 → 2040*



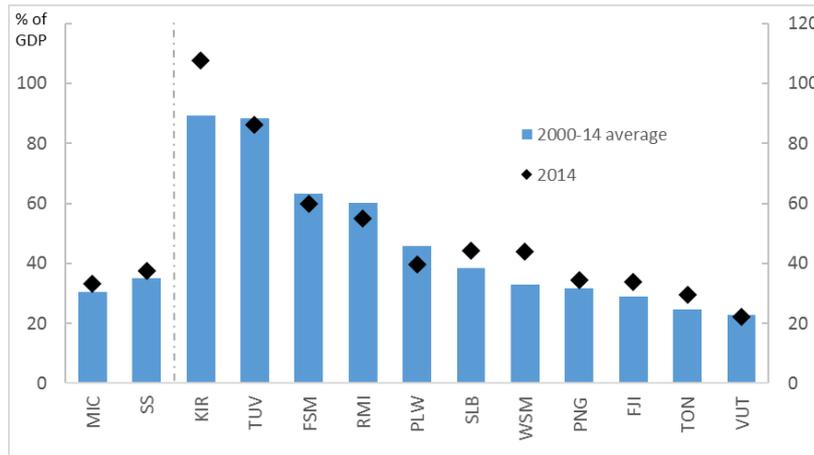
*Dotted red line denotes cross-country trend (from Figure 4)

b. Expenditures

Government expenditures tend to be relatively high in the PICs, even compared with other small states (Figure 7). The evidence suggests that PICs can be too small and dispersed for their governments to take advantage of economies of scale in the provision of many services and administrative functions.⁹ This is particularly so in the less-inhabited outer islands of PICs. Key examples include major transport, energy, and water infrastructure; legislative functions; and general public administration and policy formulation. The PICs also face high import costs, owing primarily to their distance from major markets and shipping routes, small import volumes, and lack of competition among the few international shipping lines that do serve them (Yang et al. 2013). This further increases the cost of providing import-dependent public services.

⁹ See Horscroft (2014), *Pacific Island Countries: Economic Prospects and Policy Priorities*, in the World Bank East Asia and Pacific Economic Update, October, and the references cited therein.

Figure 7: PIC public spending as a percentage of GDP

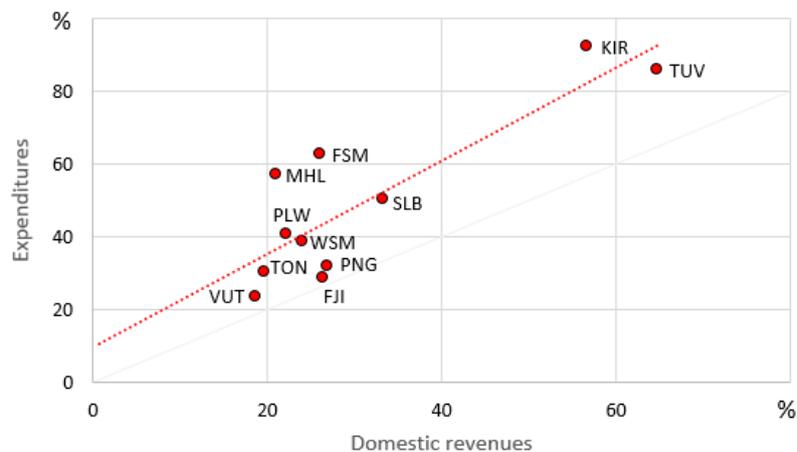


The PICs with particularly high levels of public spending are those where the effects of smallness, remoteness and internal dispersion are most pronounced. Notwithstanding some fluctuations, government spending has been systematically high as a share of GDP in the more dispersed countries of Kiribati, Tuvalu, and the North Pacific. Most of the other PICs, on the other hand, spend at levels that are closer to middle-income country and small state averages. As expected, there is a notable correlation between domestic revenue and expenditure among the PICs (as there is among all countries), suggesting that lower than average domestic revenues may have constrained expenditures in Tonga and Vanuatu, while elevated fishing revenues have facilitated even higher public spending in Kiribati and Tuvalu in recent years (Figure 8).

Figure 8

PIC government revenues and expenditures

2010-14 average, percent of GDP



The main driver of the high levels of government spending in Kiribati, Tuvalu, and the North Pacific is current expenditures (Figure 9). This is partly due to their relatively high wage bills (Figure 10). In these PICs, government spending tends to act as a particularly important means of directly creating formal sector employment and distributing aid flows, given the general lack of income-creating opportunities in the private sector. In Kiribati, for instance, the public sector accounts for nearly 80 percent of formal sector jobs, and public sector wages are over a quarter of GDP. Nevertheless, as a share of total current expenditure, public sector wage bills in Kiribati, Tuvalu, FSM and RMI are broadly in line with overall PIC and small state averages (Figure 11), indicating that the non-wage components of current spending are also higher in these countries. High spending on goods and services can be attributed to inflated import costs and the substantial recurrent

costs associated with delivering public services to small, dispersed populations, as well as low levels of competition due to the small size of the domestic market.

Figure 9: Current expenditure as a % of GDP

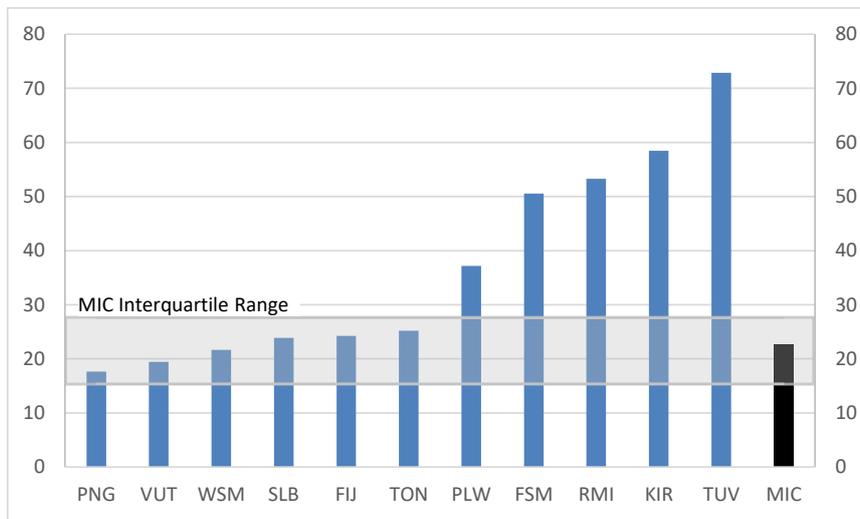


Figure 10: Public sector wages as a % of GDP

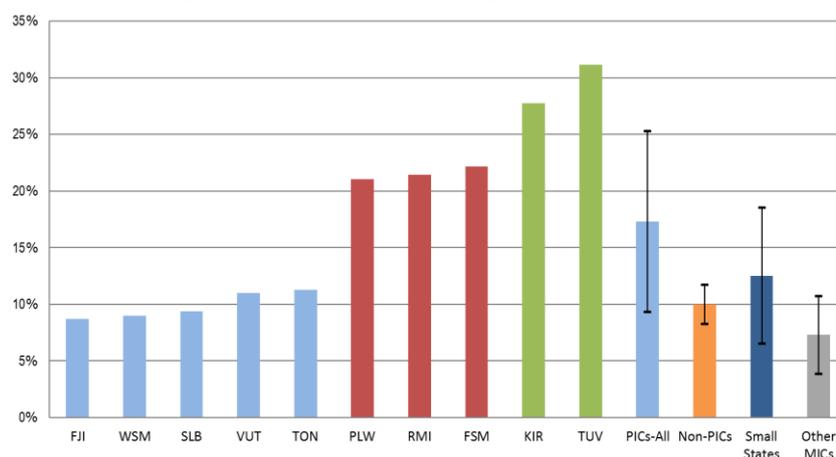
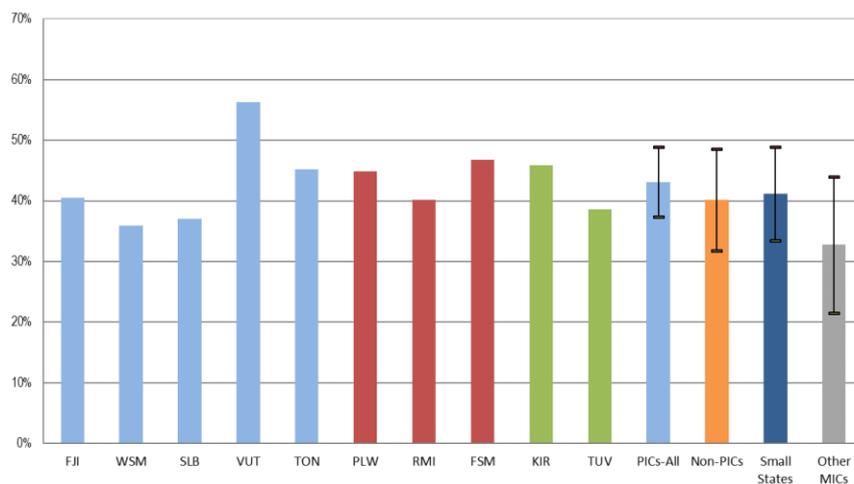


Figure 11: Public sector wages as a % of current expenditure



Capital spending as a share of GDP also tends to be above comparative benchmarks in most of the PICs, and markedly so in Kiribati and the Solomon Islands (Figure 12 and Figure 13). There are a number of drivers for

elevated levels of capital expenditure in the PICs, including: the higher costs involved in building basic infrastructure such as roads, water, electricity, and telecommunications to ensure adequate service to small populations distributed across islands; the high cost of importing capital goods and building materials; shortages of public infrastructure, including as a result of frequent natural disasters that damage or destroy the capital stock; and the availability of development assistance (much of it on grant or highly-concessional credit terms) to fund capital projects. For instance, Solomon Islands has scaled up its infrastructure spending considerably since the early-2000s, with the government prioritizing rural infrastructure and development, while in Kiribati, major donor-financed road, port, and airport infrastructure projects account for most of the capital spending. Tonga and Vanuatu, on the other hand, have had levels of public investment well below regional and small state norms, in line with their relatively low levels of revenue. Recognizing its need to develop public infrastructure, Vanuatu has begun an ambitious program of government investment, including in response to Cyclone Pam in 2015, which should see capital spending rise over time.

Figure 12: Capital expenditure as a % of GDP

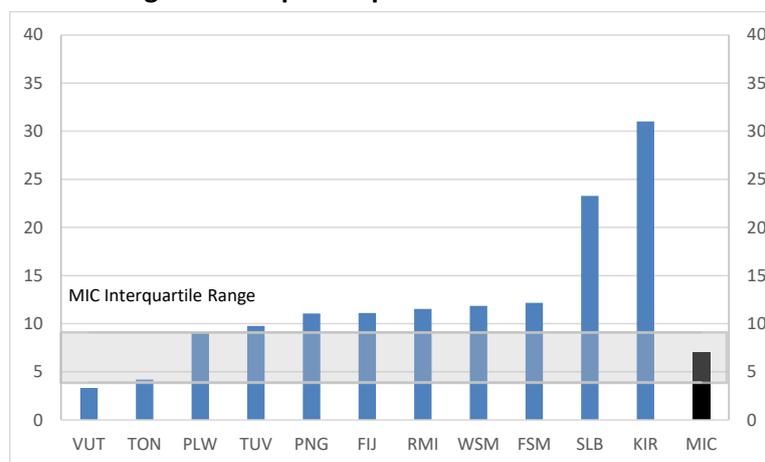
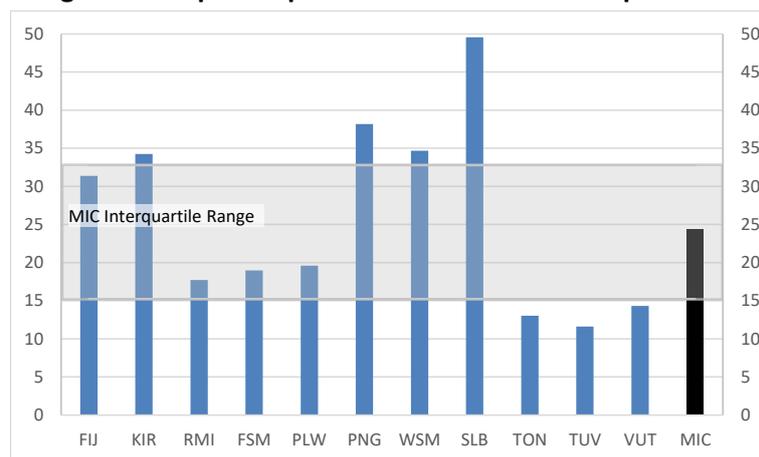


Figure 13: Capital expenditure as a % of total expenditure

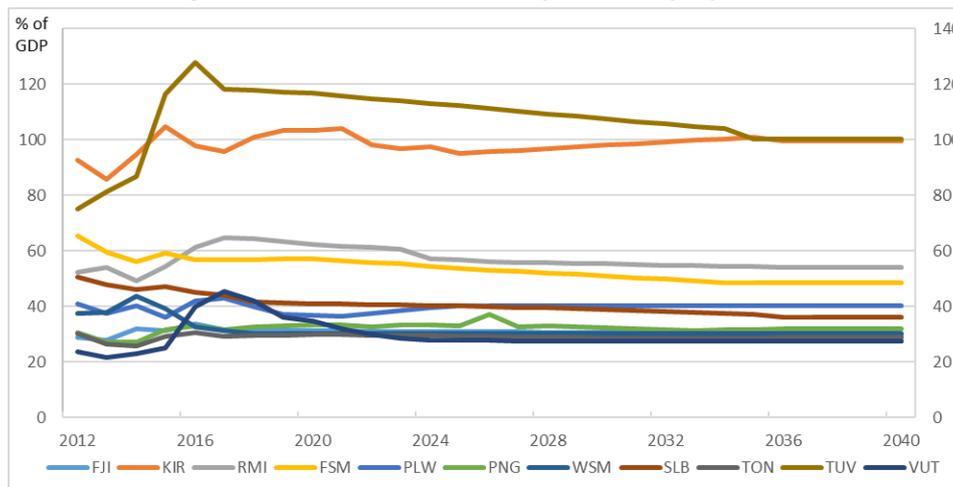


In projecting public expenditures to 2040 for each of the PICs, three scenarios are considered: a baseline scenario, a historical scenario, and a ‘human development’ scenario. The baseline scenario is based on the projections in the most recent IMF/WB Debt Sustainability Analysis for each country. The historical scenario assumes that public expenditure levels revert to their historical averages, while the human development scenario is based on estimates of the level of spending necessary to achieve a target level of human development in each of the PICs.

i. Baseline Projections

The baseline scenario projections imply a long-run moderation in public spending (as a share of GDP) across most PICs (Figure 14). The declines tend to be particularly marked in countries where current expenditure levels are comparatively high, namely Tuvalu, FSM, and the Solomon Islands. In contrast, Kiribati's relatively high public expenditure levels are expected to remain broadly unchanged over the period. As far out as 2040, substantial variation continues to prevail in spending levels across the PICs, consistent with the view that the relatively high government spending needs in Kiribati, Tuvalu, and the North Pacific are structural in nature and likely to persist well into the future. Nevertheless, the projected consolidation in public spending from recent and historical average levels in the baseline scenario is quite ambitious in some cases.

Figure 14: Baseline scenario expenditure projections



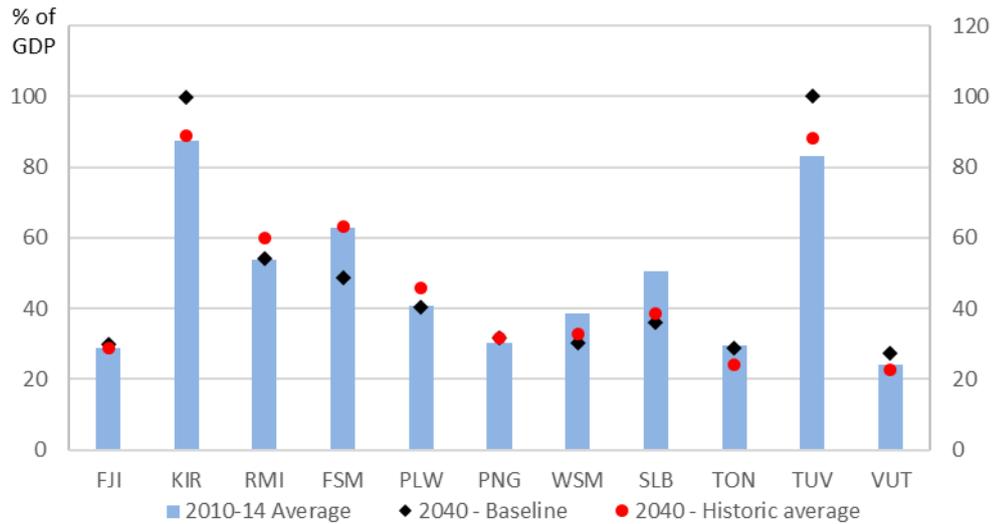
ii. Historical Scenario

Under the historical scenario, historical average spending levels in each country are projected to persist through to 2040. The ratio of public expenditure to GDP is assumed to follow the DSA projections until 2020. From 2020, the projections for each PIC converge to its fifteen-year historical average expenditure-to-GDP ratio over the next five years, with the ratio remaining constant at that level thereafter.

In the Marshall Islands, FSM, Palau, Samoa and the Solomon Islands, the historical scenario results in higher levels of public expenditure than the baseline scenario (Figure 15). This is in part due to the baseline scenario accounting for stated government plans which frequently involve fiscal consolidation through controls on expenditure. In particular, anticipated changes to foreign aid arrangements between the United States and the North Pacific nations of FSM, Palau and the Marshall Islands will likely place pressure on these PICs to rein in public expenditures in order to ensure long-run fiscal sustainability. Nonetheless, given that fiscal consolidation plans have been challenging to implement in practice in the Pacific, the historical scenario provides a useful point of comparison with the baseline projections.

For Kiribati, Tuvalu, Tonga and Vanuatu, the historical scenario yields lower levels of public expenditure in 2040 than the baseline projections. For Kiribati and Tuvalu, this likely reflects the increased fiscal space in the baseline projections created by recent increases in fishing revenues. In Tonga and Vanuatu, on the other hand, this is likely a recognition that public expenditures have historically been unduly constrained, due largely to relatively low revenue mobilization.

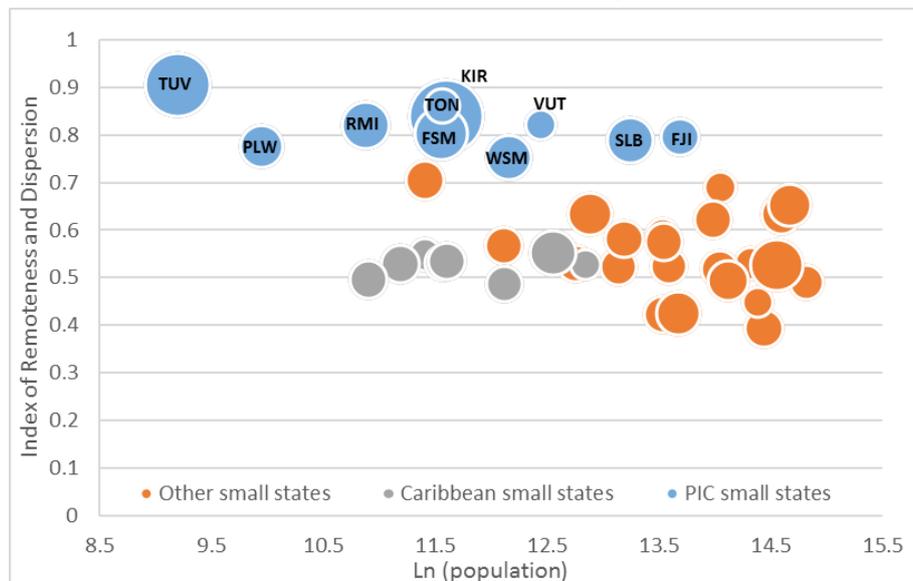
Figure 15: Historical scenario expenditures



iii. Human Development Scenario

As outlined above, the evidence suggests that smallness, remoteness and dispersion all act to raise the cost of public administration in the PICs, with these geographic factors reflected in thin labor markets, elevated import costs and an inability to take advantage of scale economies. Measures of remoteness (based on average GDP-weighted distance from major markets), and internal dispersion (based on the size of the Exclusive Economic Zone) confirm that small states that are more remote or dispersed also tend to have higher levels of public expenditure. On these measures, the contrast between the PICs and other small island developing states in the Caribbean and elsewhere is marked (Figure 16).

Figure 16: Public expenditure in small states (adapted from Horscroft, 2014; size of circle reflects public expenditure to GDP ratio)



Although there are sound theoretical reasons for why PIC governments are relatively large as a proportion of the economy, it is less clear what level of public expenditure is required to achieve an acceptable level of public service provision. For instance, it may be the case that even after controlling for their geographic constraints, some PIC governments spend more than should be necessary to achieve given human

development outcomes in health and education, e.g. because of weak governance or public financial management, or because they have alternative objectives – such as maintaining high levels of public sector employment – which are not necessarily consistent with improving the provision of public services. The spending of other PIC governments may be comparatively effective (in terms of achieving human development outcomes), even if their geographic characteristics necessitate relatively high levels of spending.

The analysis that follows provides a rough attempt to i) estimate the impact of geographic constraints on the “effectiveness” of public expenditure, and ii) estimate the level of government spending that would be consistent with improved human development outcomes in each of the PICs. For this purpose, “effectiveness” is defined in terms of the human development outcomes achieved for a given level of public spending per person. Note that in this context, spending effectiveness will depend on factors that governments can work to improve (e.g. improved public financial management or increased allocative efficiency) but also factors that may lie outside government control (e.g. geographic characteristics, as well as linguistic diversity, history of conflict, social and cultural factors, etc).¹⁰

The measure of development outcomes that forms the basis of this exercise is a modified version of the UNDP’s human development index (HDI). The HDI is an internationally-recognized indicator of development progress that emphasizes human capabilities, aggregating indicators of life expectancy, schooling, and income per capita. In considering the causal effects of public spending on development outcomes, we focus on the non-income (health and education) components of the HDI. This is because the relationship between income per capita and public spending is highly endogenous, with growth in incomes likely to have a direct causal impact on public spending per capita (via an increase in the tax base).

However, the non-income components of the HDI may not adequately account for the unique challenges of service provision in many PICs. The PICs face obstacles in delivering infrastructure and utility services to a small but often highly dispersed population. While many health and education services can be decentralized and offered in regional or village-based facilities, providing infrastructure and utilities services to dispersed populations can be more challenging. For instance, the per capita cost of providing a minimum standard of sewerage and water treatment services, internet connections, or reliable electricity to all households across the 21 scattered islands of Kiribati or the 300 inhabited islands of the Solomon Islands is likely to be relatively high. Table 1 shows the number of inhabited islands in each of the PICs, as well as the ocean area which they cover.

Table 1: Number of inhabited islands and Exclusive Economic Zones (EEZ) of the PICs

	Fiji	Kiribati	RMI	FSM	Palau	PNG	Samoa	SLB	Tonga	Tuvalu	Vanuatu
Inhabited islands	100	21	24	65	8	-	4	300	36	9	72
EEZ ('000s km sq)	1,282	3,437	1,992	2,992	604	2,397	132	1,596	665	752	828
Population ('000s)	886	110	53	104	21	7,464	192	572	106	10	259

Note: Data on number of inhabited islands is unavailable for PNG

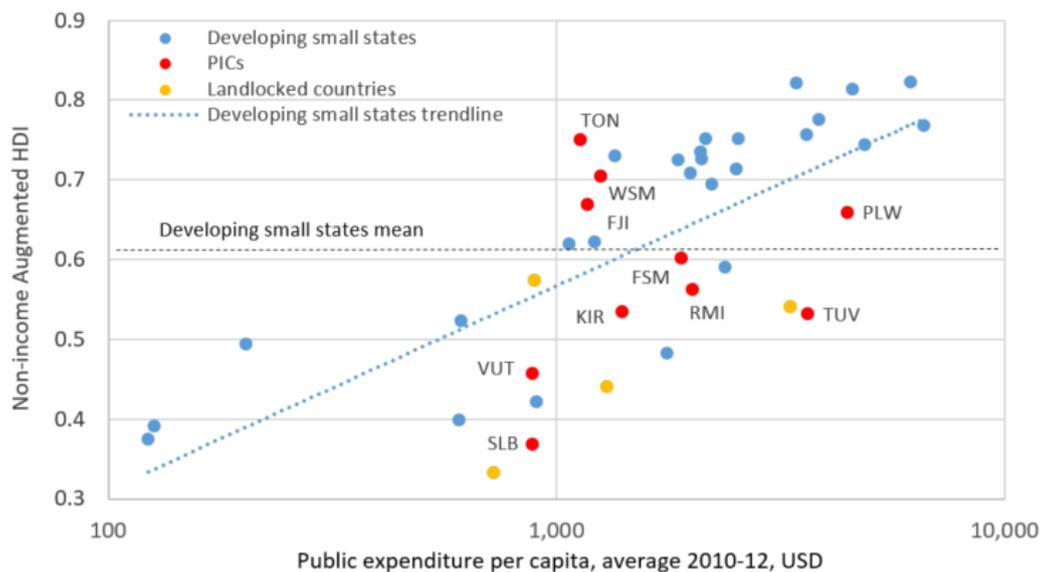
To provide a more complete picture of the development conditions in PICs vis-à-vis other countries, we incorporate access to utilities in our measure of human development. We construct an augmented non-

¹⁰ As noted above, this is a highly-circumscribed use of the term ‘effectiveness’, given that governments will justifiably have a number of other objectives apart from improving the indicators that comprise the augmented HDI constructed for the purposes of this exercise.

income HDI (ni-AHDI) in which the non-income components of the HDI are combined with an infrastructure index based on electrification rates and internet access in each country. The methodological details are presented in Box 2.¹¹

In comparison with other developing small states, government spending in several PICs is found to be relatively less effective (under these definitions of effectiveness and human development), as it is in the landlocked small states which face their own particular geographic constraints. Across developing small states, there is a close relationship between the ni-AHDI and public expenditure, with cross-country variation in the log of per capita spending explaining over 50 per cent of the cross-country variation in the ni-AHDI (Figure 17). But most PICs and landlocked states fall below the linear regression line for small states, suggesting that given levels of public expenditure in geographically-challenged countries tend to be associated with poorer development outcomes.

Figure 17: Relationship between human development and public spending per capita in developing small states



Further analysis provides some support for the finding that among small states, internal dispersion and remoteness are associated with reduced effectiveness of public expenditure. Using the distance to the regression line in Figure 17 as a macro-level measure of public spending effectiveness (vis a vis the developing small states average), Figure 18 suggests that the weaker spending effectiveness observed in FSM, RMI, Tuvalu, Kiribati and Palau may be at least in part attributable to the wide dispersion of their populations across a number of scattered islands.¹² A similar argument holds for remoteness, although there are some extremely

¹¹ Due to data constraints ni-AHDIs for Tuvalu and RMI had to be calculated using data and estimates from alternative (non-UNDP) sources. Nevertheless, the overall findings remain valid even using alternative estimates of the ni-AHDI for these countries.

¹² Note that the measures of dispersion and remoteness drawn on in this report are imperfect. For instance, the dispersion measure is based solely on the size of a country's exclusive economic zone (EEZ), which does not account for other relevant characteristics, such as the number of inhabited islands or the difficulty of the terrain. Controlling for a more sophisticated measure of dispersion would likely increase the implied impact of geography on public spending effectiveness in the Solomon Islands in particular, which has over 300 inhabited islands but an EEZ that is smaller than that of several other PICs. The remoteness measure could usefully incorporate shipping costs as well as geographic distance to other countries (weighted by GDP). Further research could usefully test the robustness of these indicative findings using alternative measures of dispersion, remoteness, and human development.

remote PICs – Fiji, Samoa, and Tonga – where spending is relatively effective (Figure 19). At a more micro level, these results are broadly consistent with work by Cabezon et al (2015b), who construct narrower measures of public education and public health expenditure efficiency, and find that high population dispersion is associated with lower efficiency of education and health expenditure. They are also consistent with recent work on Health Financing System Assessments in the Pacific, which demonstrate that the most dispersed PICs have relatively poor infant mortality outcomes given their total per capita health expenditures (Figure 20).

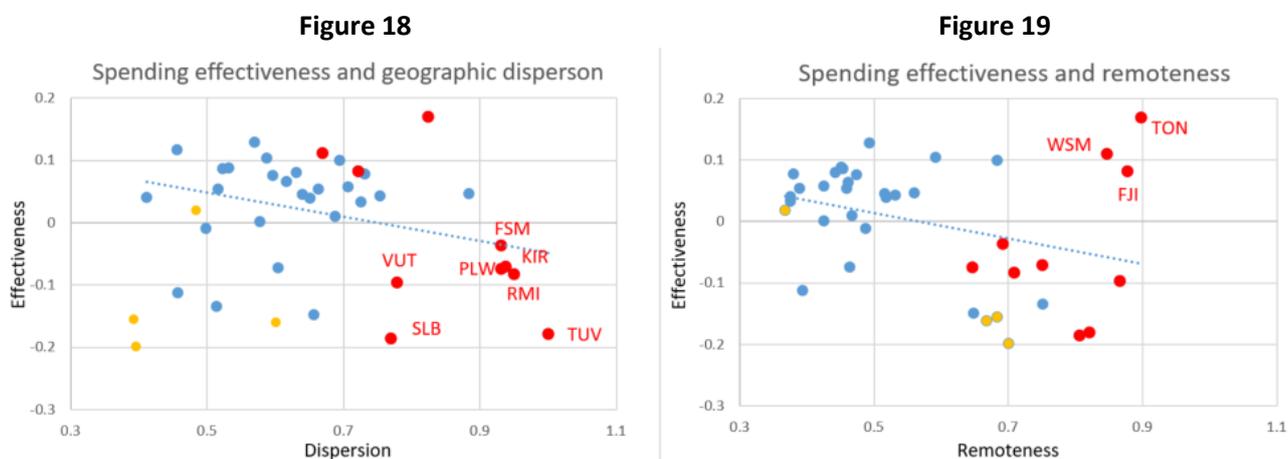
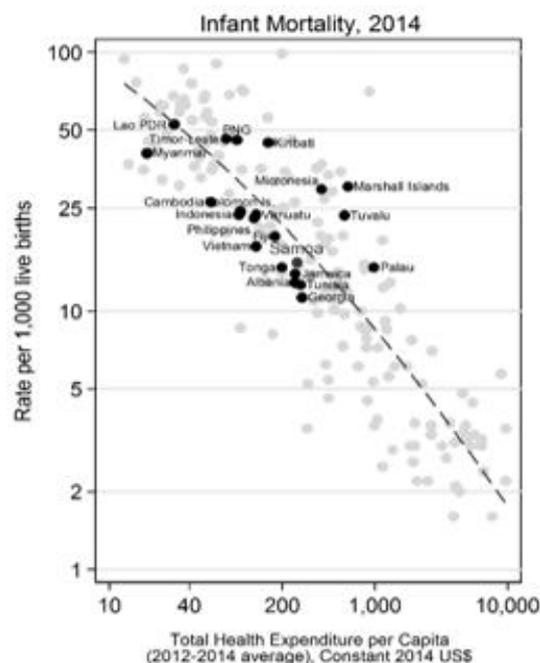


Figure 20: Infant mortality versus total health expenditure per capita



Source: World Development Indicators; WHO Global Health Observatory

Regression techniques also indicate that public spending effectiveness in the small states is negatively related to remoteness and internal dispersion. A dummy is also included for those countries which are landlocked. The analysis confirms the negative relationship between effectiveness and dispersion at higher levels of dispersion (a squared term for dispersion is statistically significant in the regression). The fit of the model is respectable, and suggests that about a third of the variation in public spending effectiveness – as defined above – can be explained by geography.

Table 2: Determinants of public spending effectiveness in developing small states

Dependent variable: public spending effectiveness (distance to trendline in Figure 17)		
Dispersion	-0.06 (0.59)	1.69 (0.03)
Dispersion squared		-1.25 (0.02)
Remoteness	-0.16 (0.13)	-0.14 (0.15)
Landlocked	-0.14 (0.01)	-0.09 (0.09)
Constant	0.15 (0.05)	-0.45 (0.08)
Adjusted R squared	0.21	0.31
No. of observations	39	39
Note: P-values in parentheses. Independent variables: dispersion (index, 0 indicating least dispersed, 1 most dispersed); remoteness (index, 0 indicating least remote, 1 most remote); landlocked (dummy, 0 = not landlocked, 1 = landlocked). The model in the last column is used in this analysis.		

While there are caveats around the statistical robustness of the precise quantitative estimates (in part due to data constraints), the results broadly suggest that after controlling for geography, several PICs spend as or more effectively than other developing small states. For each of the PICs, it is possible to estimate the proportion of any shortfall (or outperformance) in public spending effectiveness that is either i) attributable to the geographic variables contained in the model, or ii) unexplained by the model (Table 3). The results suggest that geography is a particular constraint to spending effectiveness in Tuvalu, Kiribati, and the North Pacific. On the other hand, the unexplained component is small and/or positive in most of the small PICs (except for Solomon Islands and Vanuatu) suggesting that public spending in these countries may be reasonably effective given the geographic constraints that they face.¹³ This broad finding has implications for discussions of aid effectiveness in the region (see Section 5).

The results of this analysis can be used to estimate the level of government spending consistent with achieving a target ni-AHDI. We begin by setting a target level of the ni-AHDI – for those PICs that are currently below the target – at the developing small states mean (0.61). For those countries in which the ni-AHDI is already above the small states mean (Fiji, Tonga, Samoa, and Palau), we set a target of 0.75, consistent with the current ni-AHDI of the highest-performing PIC on this measure (Tonga). This allows for further ambition in Fiji, Samoa, and Palau, notwithstanding the fact that levels of human development in these countries are already relatively high compared to other PICs and small states more generally.

Over the period to 2040, it is then assumed that the PICs address non-geographic sources of weakness in public spending effectiveness. These could include inefficiencies attributable to weak public financial management, poor governance, or lack of capacity in service provision, but also may reflect factors beyond government control or objectives for public spending which are not captured by the human development index. Specifically, the assumption implies that in those PICs where it is relatively weak, public spending effectiveness (so measured) rises to be in line with the developing small state average, after controlling for dispersion and remoteness. This is a particularly strong assumption for the Solomon Islands and Papua New

¹³ As previously noted, in the cases of Solomon Islands, and potentially (to a lesser extent) Vanuatu, the controls for dispersion and remoteness may underestimate the magnitude of the geographic constraints that these countries face relative to other small states. Nevertheless, more precise geographic controls would likely still result in a sizable unexplained component, indicating substantial non-geographic sources of weakness in public spending effectiveness. For completeness, Papua New Guinea is also presented in the results, though it is not a small state and constraints associated with internal dispersion and the mountainous terrain may also be underestimated (see Table 3, where Papua New Guinea stands out as the only PIC with a non-negative geographic component).

Guinea, where public spending effectiveness falls a long way short of the small states average, even after adjusting for geographic factors, and a substantial portion of the shortfall may result from factors outside government control e.g. related to ethnic and linguistic fragmentation¹⁴. On the other hand, we assume that any estimated public spending premium that is attributable to geographic factors persists (so that countries need to spend more to overcome such factors). Using the relationship depicted in Figure 17, it is then possible to estimate the level of government spending consistent with achievement of the target levels of human development.

Table 3: Role of geographic factors in determining effectiveness of PIC public spending

	Public spending effectiveness	of which	
		Explained by geography	Unexplained by the model
TON	0.17	-0.04	0.21
WSM	0.11	0.00	0.11
FJI	0.08	-0.01	0.09
FSM	-0.04	-0.06	0.02
KIR	-0.07	-0.07	0.00
PLW	-0.07	-0.05	-0.02
RMI	-0.08	-0.07	-0.01
VUT	-0.10	-0.02	-0.08
PNG	-0.18	0.00	-0.18
TUV	-0.18	-0.13	-0.05
SLB	-0.19	-0.01	-0.18

Among small states, the results indicate that Kiribati, RMI, Vanuatu, and the Solomon Islands may require substantial increases in public expenditure to achieve a ni-AHDI equivalent to the small-states average, while proportionately smaller increases would be required in Tuvalu and FSM (Table 4). In the case of the Solomon Islands and Vanuatu, more government spending is required primarily because current levels of spending are very low relative to other developing small states. Even if public expenditure effectiveness improves dramatically in these countries, a large increase in spending may still be required to see human development levels rise to the developing small states average. In the four other small countries – Kiribati, Tuvalu, RMI and FSM – where ni-AHDI levels are below the developing small states average, geographic characteristics account for much of the required increase in spending. In Fiji, Samoa, and Palau, substantial increases in public spending would be required to see human development levels rise to be consistent with those of Tonga, currently the best performing PIC on this measure.¹⁵

¹⁴ See e.g. Reilly, B., (2004), State functioning and state failure in the South Pacific, *Australian Journal of International Affairs*, 58 (4), pp.479-493.

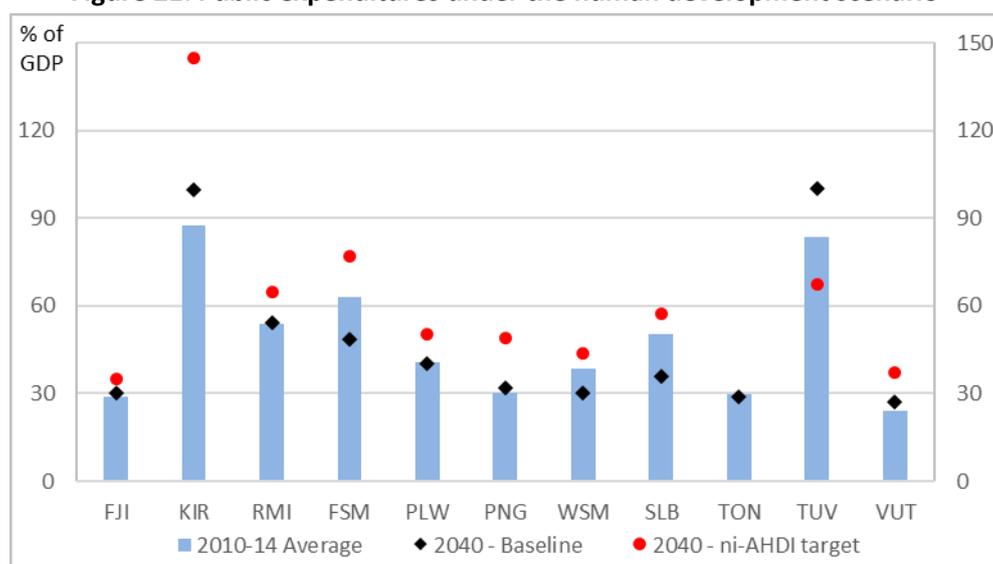
¹⁵ The wide range in required spending growth across the PICs is in large part a function of how the human development targets are set (i.e. as target *levels* rather than target *increases*). Targeting percentage increases in the human development index would tend to even out the growth in spending required across countries, but would also mean that substantial disparities in human development outcomes would remain across the PICs even if the targets were met.

Table 4: Spending changes required to reach human development targets

	Public expenditure per capita (2010-12 constant USD)			Annual ave. growth in real GDP per capita (%)*	ni-AHDI		
	2010-12 average	2040 target	Annual ave. growth (%)		2014	2040 target	Change
KIR	1403	2852	2.5	0.6	0.53	0.61	0.08
RMI	2017	2935	1.3	0.8	0.56	0.61	0.05
FSM	1899	2102	0.4	-0.2	0.60	0.61	0.01
PNG	596	1456	3.1	1.7	0.33	0.61	0.28
SLB	886	1590	2.0	1.7	0.37	0.61	0.25
TUV	3636	4728	0.9	1.6	0.53	0.61	0.08
VUT	886	1754	2.4	1.0	0.46	0.61	0.16
FJI	1175	2467	2.6	1.9	0.67	0.75	0.08
PLW	4454	8327	2.2	1.5	0.66	0.75	0.09
WSM	1260	1908	1.4	1.0	0.70	0.75	0.05
TON	1130	1130	0.0	1.0	0.75	0.75	0.00

*Baseline projection from IMF/WB DSAs

These results can be used to construct the human development scenario for PIC public expenditures through to 2040 (Figure 21). For Kiribati, RMI, FSM, Solomon Islands, Tuvalu and Vanuatu, Table 4 shows the annual average growth in real per capita spending needed to meet the developing small states average human development target by 2040 (assuming that any non-geographic sources of weakness in public spending effectiveness are also resolved over the same period). A move to per capita spending targets for Fiji, Samoa and Palau would be consistent with convergence to an ni-AHDI of 0.75 by 2040.¹⁶

Figure 21: Public expenditures under the human development scenario

*Note that the human development target is set at the developing small states average for all PICs except for Fiji, Samoa, Tonga, and Palau, where the target is higher.

The results suggest that achieving these human development targets will generate significant fiscal pressures for most countries. As a percentage of GDP, the largest adjustments to public expenditure (relative to the baseline) are required in Kiribati and FSM, although substantial upward adjustments would also be necessary in Papua New Guinea, the Solomon Islands, Vanuatu, and RMI. Samoa and Palau would also require a significant expansion in spending to achieve their (higher) human development targets. The differing growth

¹⁶ In the human development scenario, Tonga's government spending is assumed to be in line with baseline projections, given that it already has an ni-AHDI at the target level of 0.75.

outlooks across the PICs have a significant effect on the required change in the expenditure to GDP ratio. For instance, as real per capita baseline growth in Tuvalu is expected to average 1.6 percent per annum over the period to 2040, the required real per capita spending increase of 0.9 per cent per annum to reach the ni-AHDI target over the same period is actually consistent with a *decline* in public spending as a proportion of GDP.

Box 2: Constructing the augmented human development index

This paper introduces an augmented non-income HDI (ni-AHDI) which combines the health and education components from the UNDP's human development index (HDI) with an infrastructure component. The ni-AHDI can then be recombined with income data, to create an augmented human development index (AHDI). This box briefly describes the methodology for constructing these indices.

The HDI is constructed from sub-indices of life expectancy (*health_idx*), mean years of schooling (*edu_idx1*), expected years of schooling (*edu_idx2*) and income per capita (*inc_idx*). It is compiled as follows:

$$\text{HDI} = (\text{health_idx} * \text{average}(\text{edu_idx1}, \text{edu_idx2}) * \text{inc_idx})^{(1/3)}$$

To construct the augmented non-income HDI, the non-income components of the HDI are augmented with an infrastructure component, *inf_idx*. This infrastructure index is based on country data on electrification rates and internet usage, drawn from the UNDP's human development index 2015 statistical annex. These two infrastructure indicators were used due to their development relevance and because data on these indicators was available for all small states (other indicators were also considered but small states coverage was less comprehensive). The infrastructure index is constructed using a similar approach to the HDI's education index:

$$\text{inf_idx} = \text{average}(\text{electr_idx}, \text{inet_idx})$$

$$\text{Where electr_idx} = \frac{\text{electrification rate (\%)} - \text{minimum_rate}}{\text{maximum_rate} - \text{minimum_rate}} = \frac{\text{electrification rate (\%)} - 0}{100 - 0} = \frac{\text{electrification rate (\%)}}{100}$$

$$\text{And, similarly, inet_idx} = \frac{\text{proportion of internet users in the population (\%)}}{100}$$

The augmented non-income index, *ni_AHDI*, is then generated as:

$$\text{ni_AHDI} = (\text{health_idx} * \text{average}(\text{edu_idx1}, \text{edu_idx2}) * \text{inf_idx})^{(1/3)}$$

The *ni_AHDI* is the measure of human development used in the analysis linking development outcomes to per capita public expenditures. The effectiveness of public spending is defined as a country's deviation from the mean developing small states relationship between these two variables, as estimated by a linear regression.

The *ni_AHDI* can also be combined with income per capita data, as captured by the index *inc_idx*, to create an augmented HDI (AHDI), with the weights ascribed to income and non-income components the same as in the original HDI:

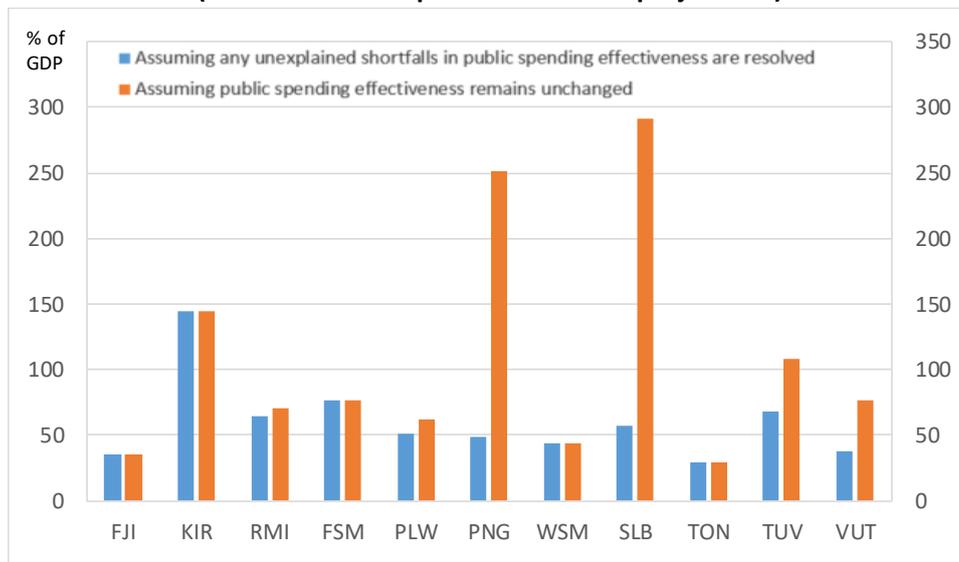
$$\text{AHDI} = (\text{inc_idx})^{(1/3)} * (\text{ni_AHDI})^{(2/3)}$$

The AHDI differs from the HDI only insofar as it includes the infrastructure index as one of its non-income components (in addition to health and education indices).

Economic growth is an extremely important driver of the PICs' ability to meet the spending needs implied by the development scenario. This is because economic growth increases the domestic revenue base available to finance government spending. As in the case of Tuvalu, relatively fast projected growth would mean that substantially higher real expenditures can be financed while containing the ratio of public spending to GDP. In contrast, the case of FSM suggests that even relatively modest increases in spending may be difficult to manage when projections for growth in the economy are weak.

The human development scenario projections of government spending may be regarded as conservative on two fronts. First, they assume that the effectiveness of public spending in the PICs will rise to be in line with the developing small states average. But this will be easier said than done for countries such as the Solomon Islands, Vanuatu, and Tuvalu, even over a 25-year period, given thin capacity and other constraints. The significance of this assumption is illustrated in Figure 22 which shows required public expenditures under the human development scenario i) in the case where this assumption holds, and ii) in the case where public spending effectiveness remains unchanged. Figure 22 suggests that the human development target would be extremely difficult to achieve for the Solomon Islands and Papua New Guinea in the absence of improvements in the quality of public spending (and would also be much less attainable for Vanuatu and Tuvalu). Second, the estimates assume that public expenditures tend to increase with inflation rather than with GDP, so that the per capita public spending required to achieve a desired level of development outcomes in 2015 remains constant in real terms through to 2040. This will understate the magnitude of the required increase in spending to the extent that i) the wage bill is a significant driver of public expenditure in the PICs; and ii) that wages tend to rise in line with GDP rather than with inflation).

Figure 22: The public spending effectiveness assumption in the human development scenario (Effect on 2040 expenditure to GDP projections)



Finally, we calculate projections of the augmented human development index (AHD) for each of the PICs – assuming that government spending consistent with the human development scenario takes place – by also incorporating baseline projections of growth in incomes (see Box 2). All countries exhibit increases in their AHD from 2015 to 2040, though the magnitude of these improvements varies substantially (Figure 23). The contribution of income growth to the overall improvement in the AHD is illustrated in Figure 24. In most countries, the modelled impact of higher public expenditure on the non-income components (health, education, and infrastructure) is the major driver of improvements in the overall development index.

Figure 23: Trajectories for AHDHI from 2015 to 2040, assuming public spending consistent with the human development scenario

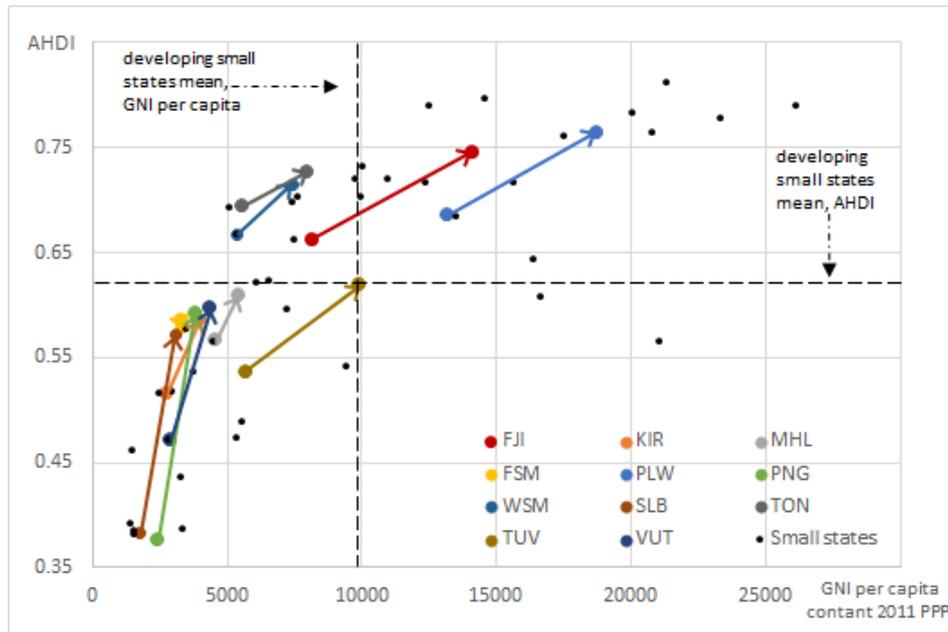
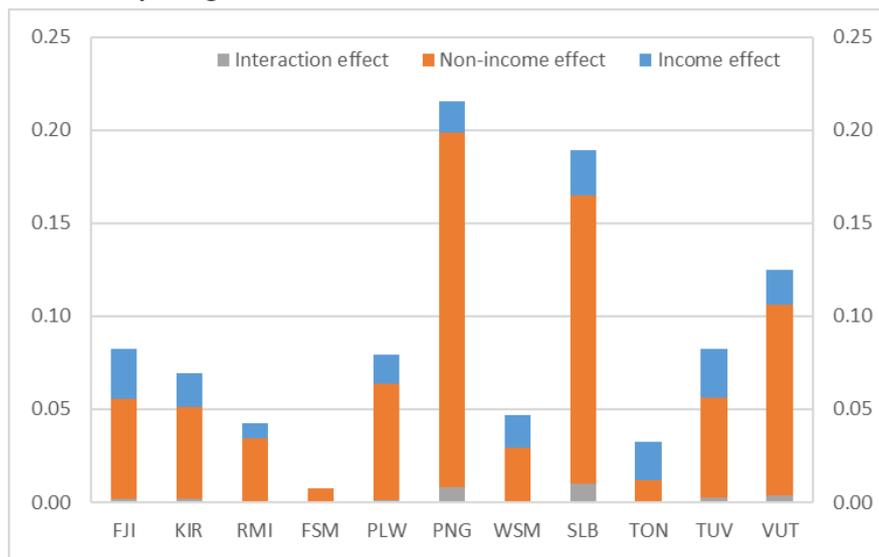


Figure 24: Decomposing the increase in the AHDHI into income and non-income drivers



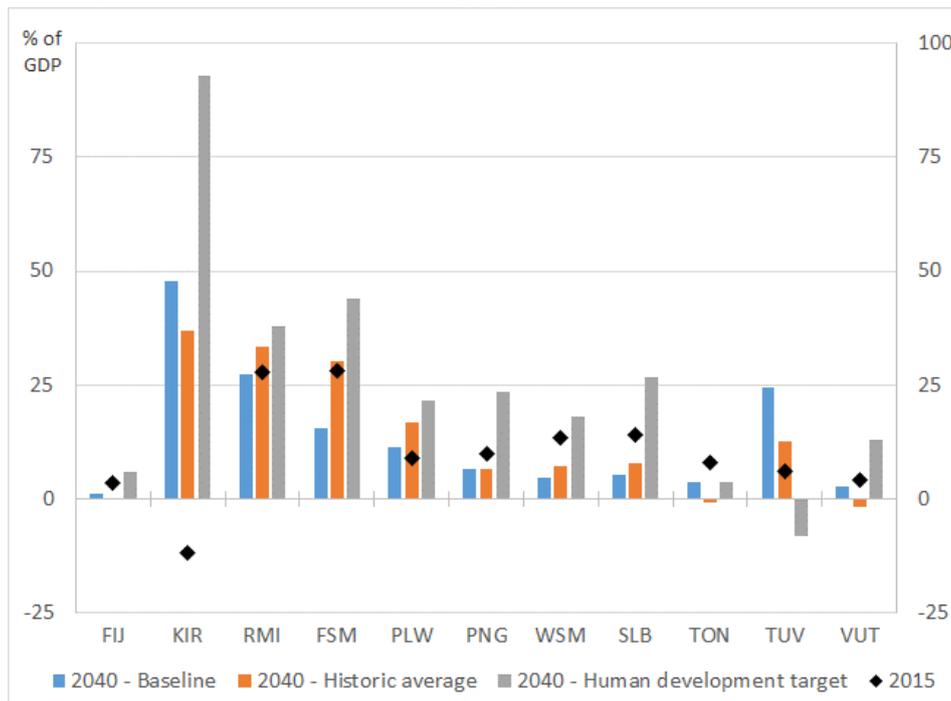
c. The domestic financing gap

Combining the expenditure scenarios with the domestic revenue projections provides an initial picture of the extent to which revenues (i.e. excluding grants, trust fund flows, and ‘below the line’ financing) will cover the future spending needs of PIC governments. In Figure 25, the projected fiscal balance in 2040 (excluding grant and trust fund flows) is shown for each PIC for each of the three expenditure scenarios, and compared with 2015 levels.

Most countries can expect their domestic financing gap to improve somewhat between 2015 and 2040 in the baseline expenditure scenario. However, in some cases this is largely based on the recognition that

substantial consolidation is required to ensure long-run fiscal sustainability: in this sense the baseline should be viewed as an optimistic projection rather than a central estimate. The main exceptions are Kiribati and Tuvalu, which will see their fiscal gaps expand in the baseline by around a further 60 percentage points and 20 percentage points, respectively (due to the assumption that current high levels of fishing revenue will not be sustained). In the Marshall Islands, Micronesia, and Palau, a continuation of spending at historical levels would see the financing gap remain high or expand further. Financing the expenditures implied by the human development scenario is likely to pose substantial challenges not just for Kiribati, FSM, and RMI, but also for Solomon Islands, Papua New Guinea, Vanuatu, Palau, and Samoa, where domestic financing gaps exceeding 10 percent of GDP are unlikely to be sustainable in the long run.

Figure 25: Projected 2040 domestic financing gaps under the various expenditure scenarios



3. Financing the gap

Given a shortfall in domestic revenues relative to (desired) expenditures, governments have several options for financing the gap. For example, they may draw on previous surpluses or donor contributions that have been invested in trust funds; take advantage of foreign aid and concessional loans; or issue debt in domestic or global capital markets. Of course, they can also scale back their planned expenditures, but doing so may have adverse consequences given elevated development needs, and given that public spending effectiveness is already comparable with or better than developing small state averages in a number of cases (after controlling for geography).

Under reasonable assumptions for domestic revenues and expenditures, most PICs can expect domestic financing gaps to persist over the next 25 years. For countries seeking to expand their public spending in a manner consistent with the human development scenario, the associated fiscal pressures would be significantly greater again. To finance these spending needs, the analysis suggests that aid will remain extremely important for PIC governments. In general, aid in the Pacific should be viewed as an essential component of an ongoing collaboration between the PICs and development partners to fill structural financing gaps, rather than as a short or medium-term ‘intervention’ that can be expected to yield quick improvements in development indicators.

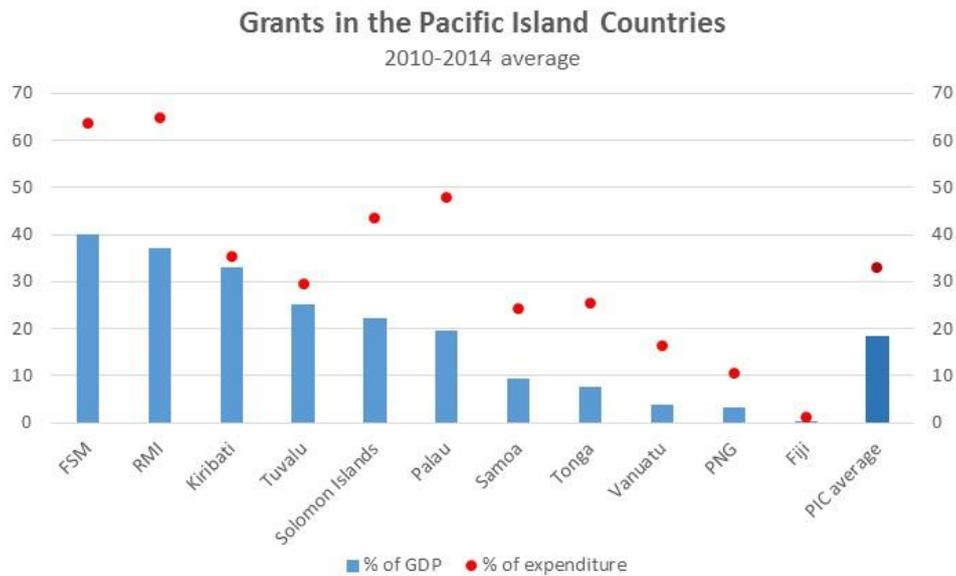
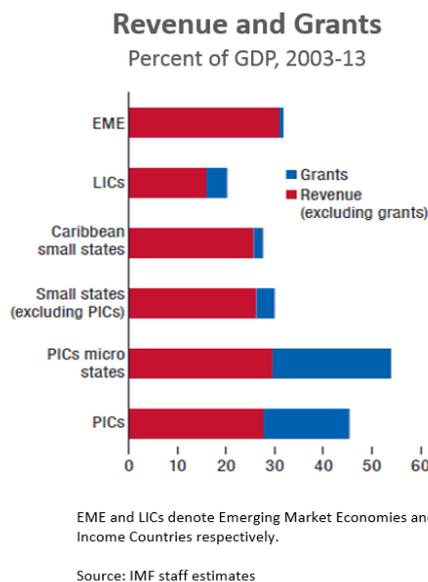
While trust funds will also play a significant role in financing (and ideally stabilizing) PIC government expenditures, trust funds alone cannot be relied upon to secure long-term fiscal sustainability. And debt is not a panacea, particularly for those PICs already at an elevated risk of debt distress. Given their macroeconomic vulnerabilities, a cautious approach to public borrowing is advisable: PICs should prioritize concessional loans where possible, and establish robust rules around the contracting of new debt. Development partners could also do more – not only to provide more grant aid to countries in need, but also to be more flexible on the financing terms that they offer.

a. Grant aid from development partners

Grant aid has historically been the main means of supplementing domestic revenue in the PICs. The PICs on average have received a substantially larger amount of grant assistance (as a percentage of GDP) than other small states and low-income/emerging market economies (Figure 27). However, there is considerable variation across the PICs, with Fiji receiving very little grant assistance, while over half of public expenditures in RMI and FSM are financed by grants (Figure 26).

The smaller PICs tend to benefit proportionately more from grant aid. This can be largely attributed to thinner capacity and elevated costs associated with the difficulty of realizing economies of scale in public administration in small states. As is clear from Figure 26, grants as a proportion of GDP tend to be much larger in the smaller countries than in their larger counterparts (although Solomon Islands is a notable exception).

Figure 26

Figure 27: A comparative perspective on revenue and grants in the PICs¹⁷

The historical relationship between the US and the ‘Compact countries’ (FSM, RMI, and Palau) is another important driver of this result. As a legacy of post-WWII territorial arrangements, the Compact countries – which are among the smallest of the PICs – are parties to agreements with the US that guarantee them generous levels of financial assistance through to 2023, when the Compact agreements expire. Currently, US grants to these countries account for 70-80 percent of total grant flows. As a result, these countries have among the highest aid-to-GDP shares in the Pacific (with Palau’s share only declining in recent years).

The PICs with the highest levels of public spending are those that benefit most from grant aid, with the causality between aid inflows and public expenditures likely running in both directions (Figure 28). As noted in Section 2, there are several reasons why public expenditures are necessarily high as a proportion of GDP in

¹⁷ Reproduced from IMF (2014), *Fiscal Monitor – Public Expenditure Reform: Making Difficult Choices*, April.

the PICs – particularly in those PICs where the effects of geography are most pronounced – and hence the relatively high grant flows to these countries can be justified based on government needs. At the same time, public expenditures in recipient countries are generally scaled to match the grant funding that is available. Development partners appear to be reasonably sophisticated in calibrating their allocation decisions in the Pacific, taking into account evidence of need as well as the actions of other donors. Considering the six biggest ODA recipients in the region, Australia disburses relatively large amounts of aid in the Solomon Islands, Kiribati, and Tuvalu, but has a comparatively smaller presence in the North Pacific where the US is the lead provider of ODA (Figure 29).

Figure 28
PIC grants and government expenditures

2010-14 average, percent of GDP

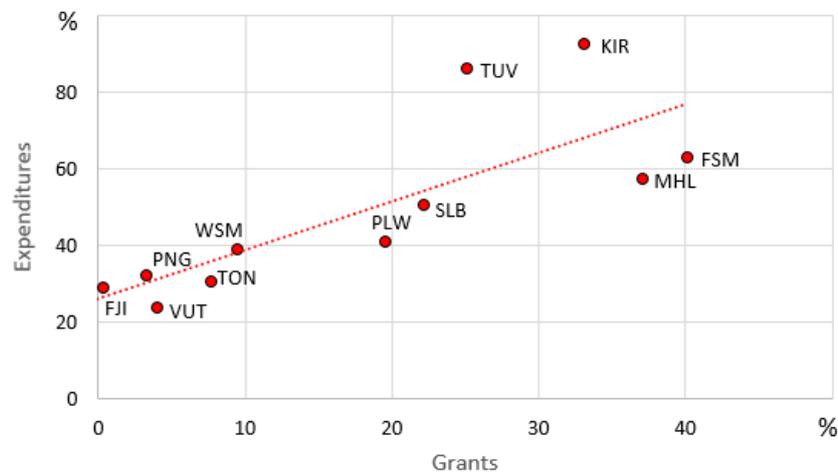
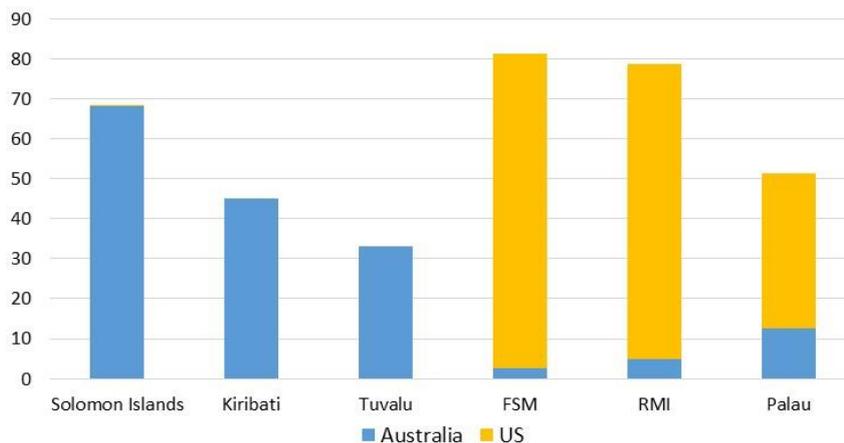


Figure 29

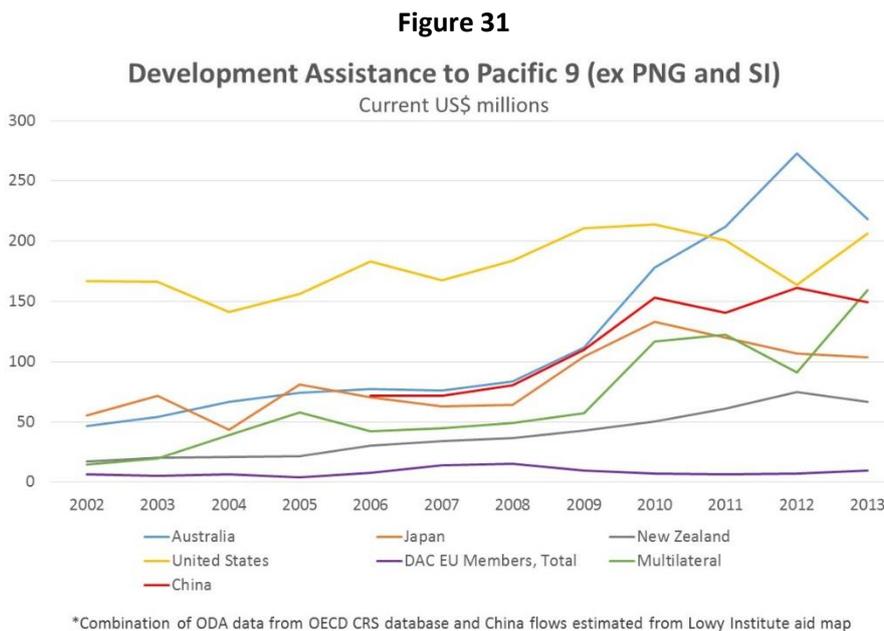
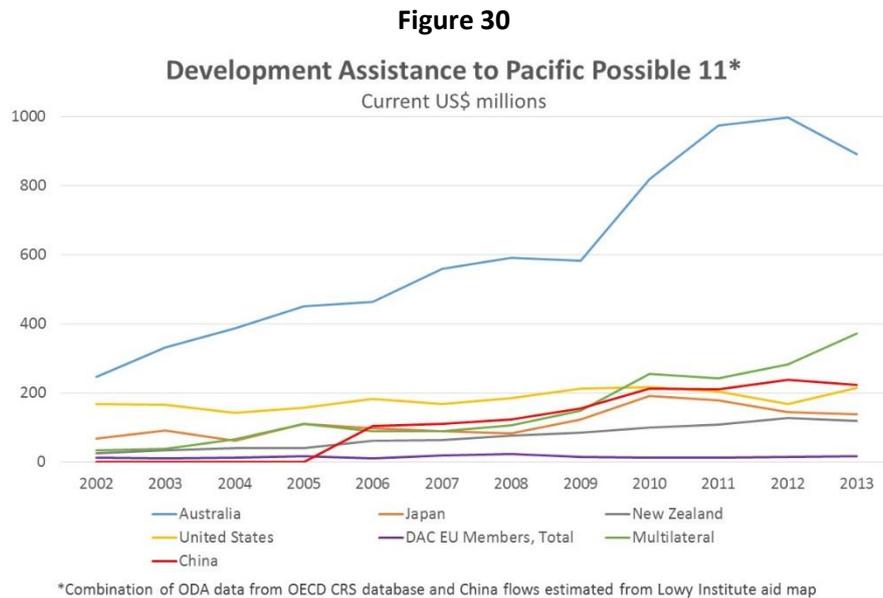
Official Development Assistance to the PICs

2013, percent of total



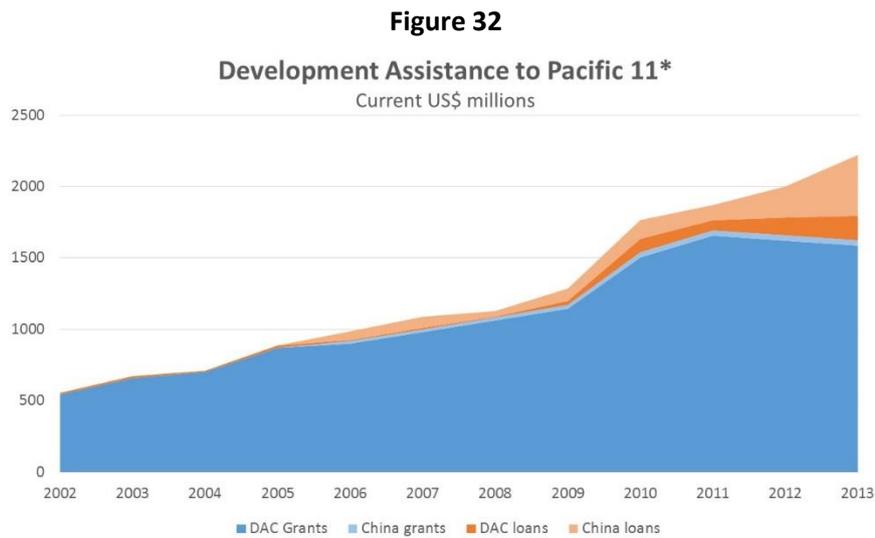
Overall, Australia continues to be the major source of development assistance in the Pacific region, with ODA to the eleven *Pacific Possible* countries growing strongly in nominal and real terms over the decade to 2013 (Figure 30). Around three quarters of Australia’s total ODA to the region goes to Papua New Guinea and

the Solomon Islands (Figure 30 and Figure 31). Development assistance from China, Japan, New Zealand, and the multilateral development partners has also increased substantially in recent years¹⁸.



While grants continue to be the dominant form of external government financing, concessional and semi-concessional loans from development partners are playing an increasing role in the region. PICs assessed at being at a low or moderate risk of debt distress receive a portion of their financing from the World Bank and ADB on highly-concessional credit terms. Much of China's assistance is provided through soft loans, at terms (often 2 percent interest, 20-year maturity with a 5-year grace period) which are more concessional than market rates but less concessional than terms provided by other development partners (Figure 32).

¹⁸ In Figures 30, 31, and 32, the total amount of development assistance from China over the period 2006-13 is drawn from the Lowy Institute aid map, and then the yearly flows of ODA from China are estimated based on yearly changes in total ODA flows. Aid from Taiwan, China has also increased, although official data sources are not readily available.



*DAC data from OECD CRS database, China data from Lowy Institute aid map.

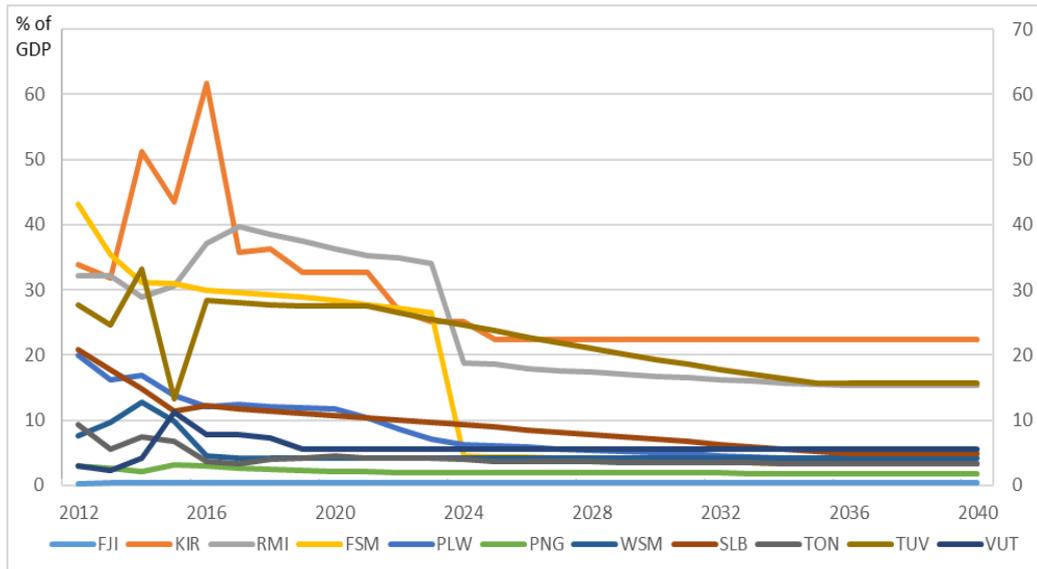
It is difficult to predict how development assistance to the region will evolve over the next 25 years. Shifting dynamics in the Asia-Pacific region and the rise of various emerging economies may see increased competition for positive relations with the PICs (and PIC votes in regional and international bodies), which could potentially lead to even higher levels of development assistance into the future. On the other hand, longer-term fiscal and demographic trends in many of the major development partners could weigh on growth and fiscal space, thereby reducing the appetite to devote public resources to aid expenditure.

In line with this uncertainty, three scenarios are presented for the future trajectory of grant aid flows to the Pacific: a baseline scenario, a zero growth scenario, and a constant aid to GDP scenario. As for domestic revenues and government expenditures, the baseline scenario is based on the projections in the most recent Debt Sustainability Analysis for each country. The zero growth scenario assumes each development partner holds its aid to the region constant in inflation-adjusted terms, while the constant aid to GDP scenario assumes each development partner maintains its current ratio of Pacific grant aid to GDP. In each scenario, the scheduled 2023 expiry of US Compact grants for FSM, RMI and Palau is taken as given, while grant aid associated with other US federal programs is assumed to continue over the projection period. Although these scenarios do not incorporate the scale-up in International Development Association (IDA) resources available to the PICs from July 2017, the scale-up will have an important impact on the fiscal outlook for the smallest PICs in particular (see below).

i. Baseline Projections

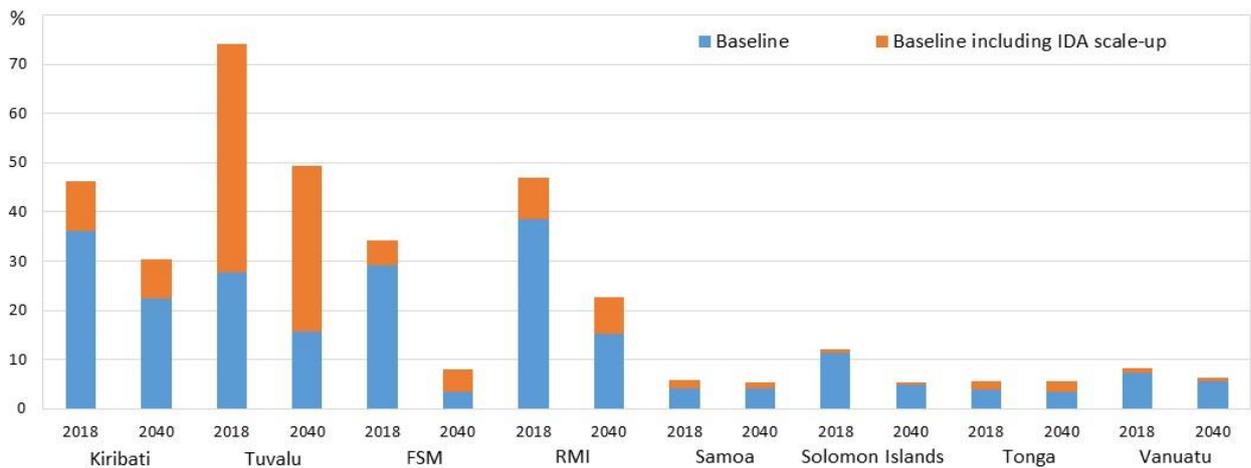
In the baseline projections, most countries see gradually declining grant support over the period to 2040 (Figure 33). The baseline scenario implies that grant flows across the 11 PICs decline from current levels, with particularly marked declines among some of the highest aid recipients: Tuvalu, Kiribati, and Solomon Islands, as well as in FSM, RMI and Palau due to the expiry of Compact grants. Indeed, the baseline scenario for most countries projects the lowest inflows of aid among the three scenarios, reflecting an expectation that recent levels of aid to the PICs may not persist over the long term. In part, this could be because the PICs are expected to draw on a broader range of financing sources in the future, which could include a greater mix of concessional and semi-concessional loans (see below).

Figure 33: Baseline grant scenario



From July 2017, the scale-up in available International Development Association (IDA) resources will have substantial implications for the fiscal outlook in a number of the PICs. The increase in financing, which has been facilitated by a record financial commitment from donor governments, will have a particularly important impact on the access to grant aid of several of the smallest and most vulnerable PICs, including Kiribati, Tuvalu, FSM, and RMI (Figure 34). Several other PICs will also see significant increases to their grant and highly concessional credit financing as a result of the scale-up, which can be viewed as an effort to *respond* to the vulnerabilities of these countries – including those vulnerabilities associated with geography and exposure to natural disasters and climate change – which tend to manifest themselves in structural financing gaps. While these increases have not been incorporated into the baseline aid projections, their implications are discussed throughout the remainder of the paper.

Figure 34: Grant aid to GDP projections



ii. Constant aid to GDP scenario

The second aid scenario is based on the assumption that the aid-to-GDP ratios of donor countries will remain stable over the long run. Specifically, this scenario holds constant the average (2010-14) grant aid to GDP ratio for each donor country, and the distribution of each donor’s grant aid across recipient countries (see Annex 2

for more details)¹⁹. The GDP growth rates of donors up to 2021 are based on the IMF's World Economic Outlook projections, and growth is projected out to 2040 based on historic averages (Figure 35).²⁰ These GDP projections are presented in Figure 35 and the corresponding grant projections in Figure 36. As well as in Tuvalu, Kiribati, and FSM, where recent levels of aid have been particularly high, this scenario also leads to substantial increases in aid to GDP over the projection period (relative to the baseline) for Tonga, Samoa, and the Solomon Islands.

Figure 35: GDP growth projections for Pacific development partners

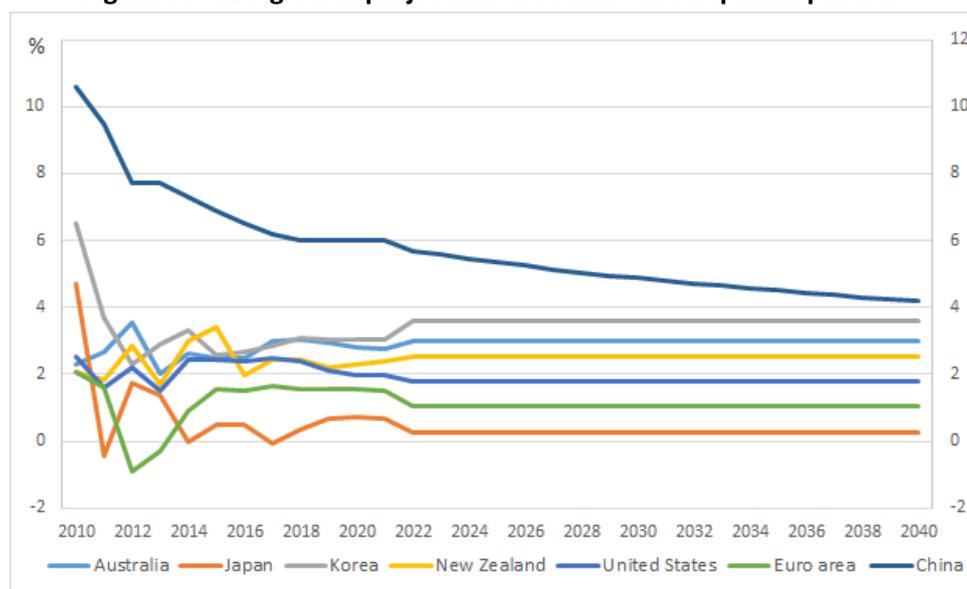
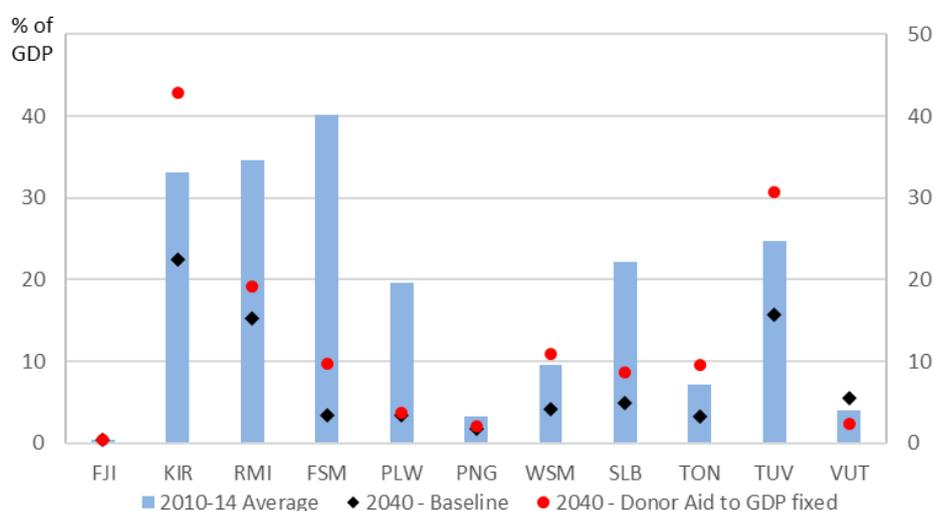


Figure 36: 2040 grant projections keeping aid to GDP ratios constant for the major development partners



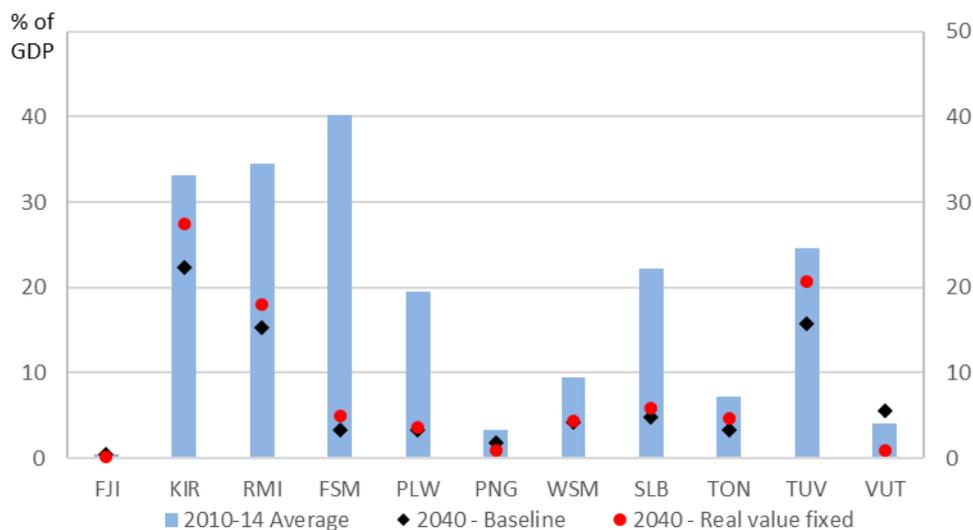
¹⁹ These calculations used a combination of OECD data, Lowy Institute data, IMF/WB DSA data, and World Bank estimates. For the Compact countries, separate projections of US grants (which are known with more certainty) were used in each of the two non-baseline scenarios. The OECD grant data were for some countries inconsistent with the IMF/WB DSA data that much of this paper's analysis is based on, due to differences in coverage, methodology, etc. In these cases the grant aid growth trajectories derived from OECD data were spliced onto the DSA history. More details are available in Annex 1.

²⁰ The exception is China, where for the purposes of this exercise growth is projected to continue to slow, in line with recent trends.

iii. Zero-growth scenario

Finally, a no-growth grant scenario was constructed based on the assumption that aid flows to each PIC remain constant in real terms through to 2040 (Figure 37). While this might be expected to be a relatively pessimistic scenario, reflecting persistently tight fiscal circumstances in development partners or a lack of enthusiasm for international development expenditure, in most cases the implied grant flows in this scenario are higher than in the baseline. The zero-growth scenario was the most pessimistic of the scenarios in PNG, Fiji and Vanuatu, possibility reflecting the fact that current grant flows to these countries are relatively low compared with other PICs (and hence there is less marked decline in the baseline projections, or an increase in the case of Vanuatu).

Figure 37: 2040 grant projections holding the real value of aid fixed for the major development partners



b. The bottom line - Fiji, Samoa, Tonga, Papua New Guinea, Solomon Islands, and Vanuatu

The scenarios outlined above can be used to formulate a bottom line assessment for each of the non-trust fund countries – Fiji, Samoa, Tonga, PNG, Solomon Islands, and Vanuatu. Combining the scenarios for revenues, expenditures and grants yields 9 possible trajectories of the fiscal balance (i.e. 1 revenue x 3 expenditure x 3 grant scenarios) for each of the PICs. These are presented for each country below, with the range of trajectories depicted in grey, and two particular trajectories highlighted – the combination of baseline revenues, expenditures and grants, and the combination of baseline revenues and grants with human development scenario expenditures.

Simply combining these scenarios falls well short of a fully-fledged model of public finances.²¹ In particular, projections of each of these flows – revenues, expenditures, and grants – are modelled independently according to separate scenarios. Hence we assume that governments do not adjust their planned spending and revenue generation efforts in response to the changing fiscal circumstances implied by the various combinations of scenarios for revenues, expenditure, and grants. Moreover, most of the scenarios are not explicitly dynamic: surpluses are not accumulated or drawn on to finance future deficits in the non-trust fund

²¹ Note that for the countries with trust funds a more explicitly dynamic model of public finance has been constructed – with the trust fund scenarios each allowing surpluses to be accumulated and deficits to be financed by the accumulation of trust fund assets.

countries, and deficits are assumed to be financed without incurring future repayment obligations. The exception is the baseline scenarios for revenues, expenditures, and grants, which are based on DSA modelling and therefore do account for these dynamics. The alternative scenarios will also partially account for debt service costs to the extent that they are based on historical values of public expenditure, which include these costs.

Nevertheless, these simplifications are also useful in some respects. In particular, modelling expenditures separately from revenues and grants allows for an independent assessment of longer-term public expenditure needs in the PICs, e.g. as illustrated by the human development scenario outlined in section 2. The aid scenarios acknowledge that over the longer-term, decisions on aid are likely to be driven by ‘supply-side’ factors affecting donors as well as by ‘demand-side’ factors.

In Tonga, Samoa, and Fiji the baseline projections for revenues, expenditures and grants are consistent with a budget that is close to balance in 2040, but the spending needs associated with meeting human development targets could result in substantial deficits in Samoa and Fiji.²² Although the baseline outlook appears comparatively strong for these countries, the baseline projections are contingent on prudent fiscal management and may constrain the extent to which development priorities can be realized. In Fiji, the analysis suggests that the public spending needed to meet human development targets could result in deficits of close to 6 percent of GDP by 2040. A reversion to historical average levels of expenditure, on the other hand, would allow the accumulation of small surpluses. In Samoa, meeting human development targets would require a major expansion of spending and increase deficits to almost 15 percent of GDP by 2040, while the historical expenditure scenario would imply a larger deficit than in the baseline, equivalent to around 3 percent of GDP.

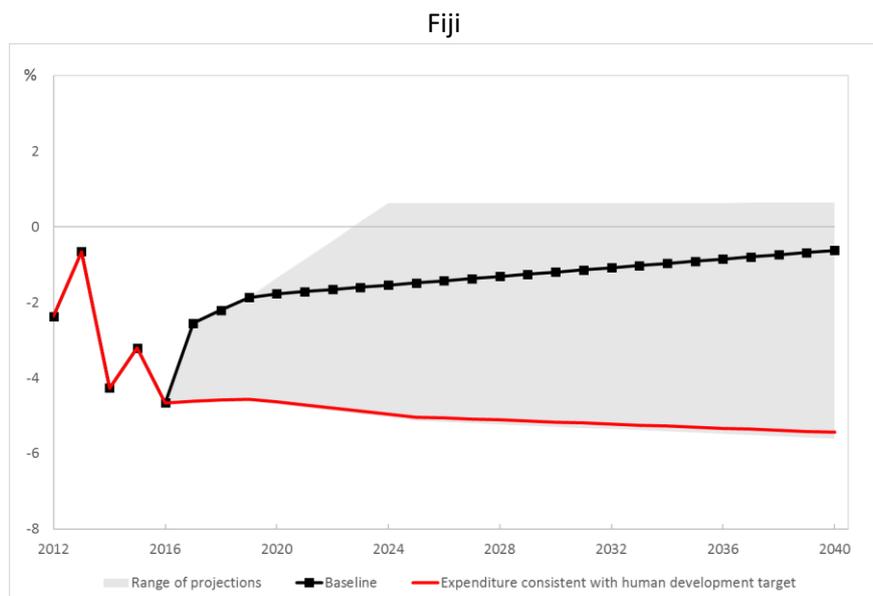
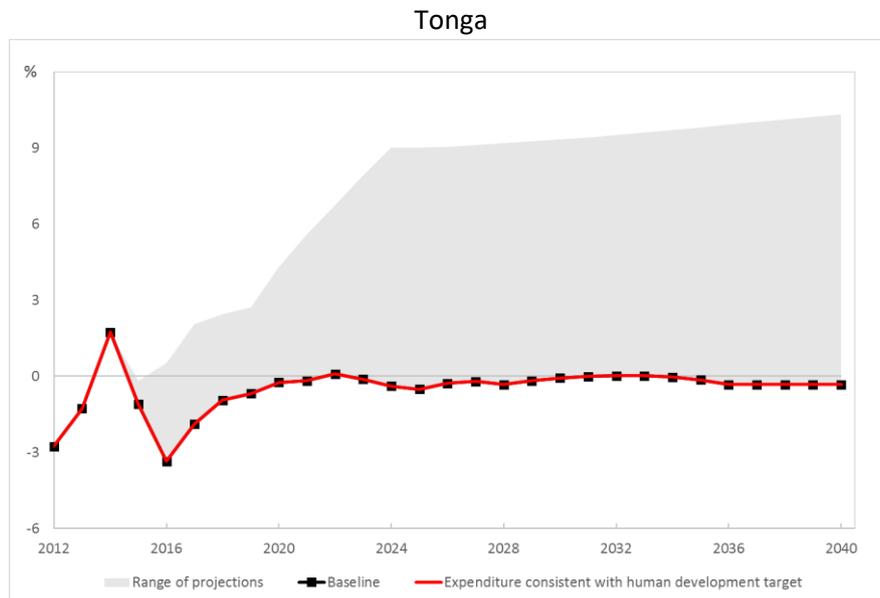
In Samoa and Tonga, the differing aid scenarios have a noticeable impact on the fiscal balance projections. Under the constant aid-to-GDP scenario, Samoa would see surpluses ranging from 4 to 6 percent of GDP in 2040, with relatively strong growth projections for the major development partners (Australia and New Zealand) keeping aid flows comparatively high. This suggests that PIC fiscal positions can be critically affected by the decisions on aid made by major development partners. In Tonga, the alternative aid scenarios also suggest some upside to the baseline – with the constant aid-to-GDP scenario strengthening the budget position by around 4 percent of GDP. In both Tonga and Samoa, the IDA scale-up is also projected to improve the baseline fiscal outlook by 1 to 2 percentage points of GDP. On the other hand, the different aid scenarios have little impact on Fiji given that it receives little in the way of grants.²³

²² Recall that the human development targets for these countries (and Palau) are set higher than for the other PICs, consistent with their stronger starting point.

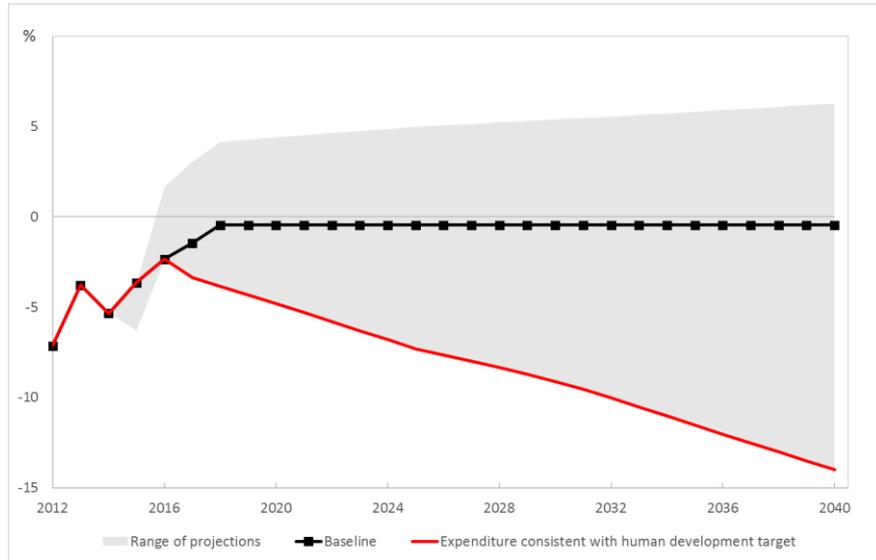
²³ These projections do not account for the post-disaster redevelopment expenditures that have arisen due to the impacts of Cyclone Winston.

Figure 38: Projected fiscal balances in Tonga, Fiji, and Samoa (% of GDP)

Note: The black line denotes the fiscal balance consistent with baseline revenues, expenditures, and grants, and the red line denotes the fiscal balance consistent with baseline revenue, baseline grants, and human development scenario expenditures. The grey region represents the envelope of fiscal outcomes arising from all scenario combinations.



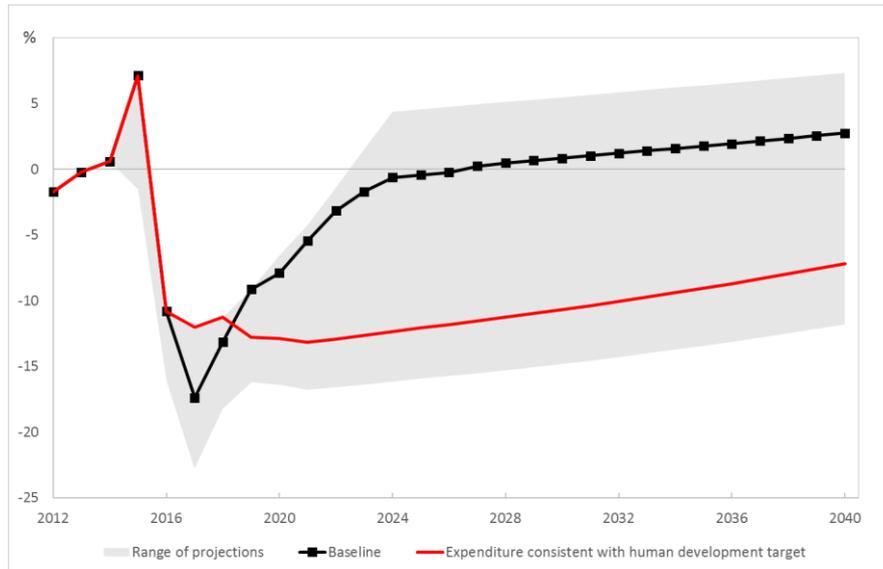
Samoa



In Vanuatu, the Solomon Islands, and Papua New Guinea, the projections are more skewed toward budget deficits. Development outcomes in these countries as measured by the HDI are well below developing small state and PIC averages, and the human development expenditure scenario in each case implies a substantial real increase in public spending relative to the baseline (even assuming substantial improvements in public spending effectiveness). At the same time, comparatively strong economic growth projections in each of these countries mean that the required increases in public spending are less pronounced as a proportion of GDP. Grant aid is a relatively small proportion of these countries' budgets, and the various aid scenarios tend to have only a modest effect on the bottom line as a result.

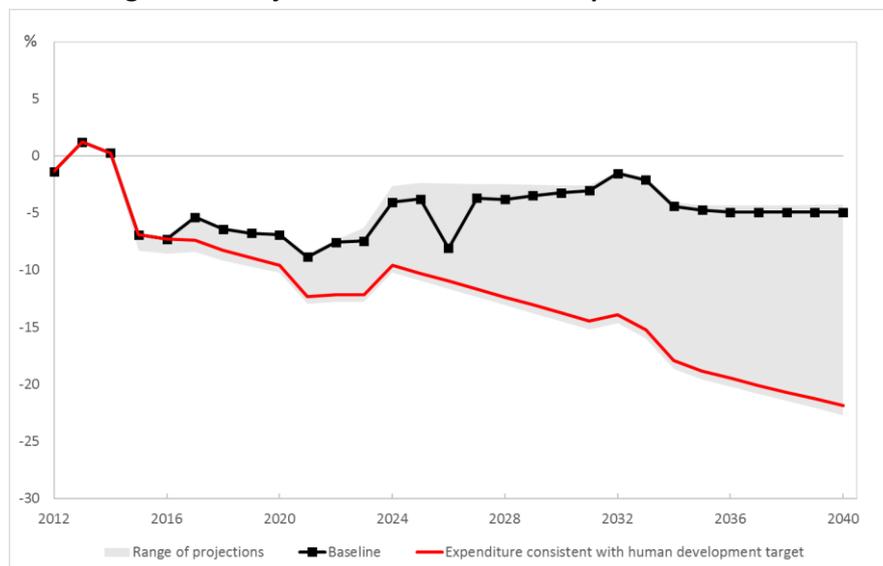
In Vanuatu, attempts to scale up public expenditure to reach per capita levels consistent with higher development outcomes would lead to substantial deficits over the projection period, in the absence of improved revenue mobilization or increased aid. The baseline projections, which account for a marked pick-up in domestic revenue mobilization (in line with cross-country averages), would result in a fiscal position close to balance from 2023 onwards, with alternative scenarios for aid having relatively modest effects on this projection. However, expenditures in the development scenario would require deficits of 10 to 13 percent of GDP over the next 25 years, even assuming a substantial improvement in the effectiveness of public spending. As domestic revenues and aid in Vanuatu are both low relative to small PIC averages, further increases in both would likely be necessary to promote stronger development outcomes, in addition to sustained efforts to improve the quality of spending.

Figure 39: Projected fiscal balances - Vanuatu



In Papua New Guinea, the baseline projections for expenditures and grants imply deficits throughout the projection period. As in Fiji, grant aid is relatively low as a proportion of GDP and hence the various aid scenarios only have a marginal impact on fiscal outcomes. The human development scenario would require much larger deficits of over 20 percent of GDP in 2040. With both domestic revenues and expenditures in PNG already close to PIC averages, maintaining a sustainable fiscal position while simultaneously addressing substantial development needs will require efforts to ensure that the government acquires its fair share of resource revenues; increases the quality of its spending; and boosts the extent to which it gains from aid.

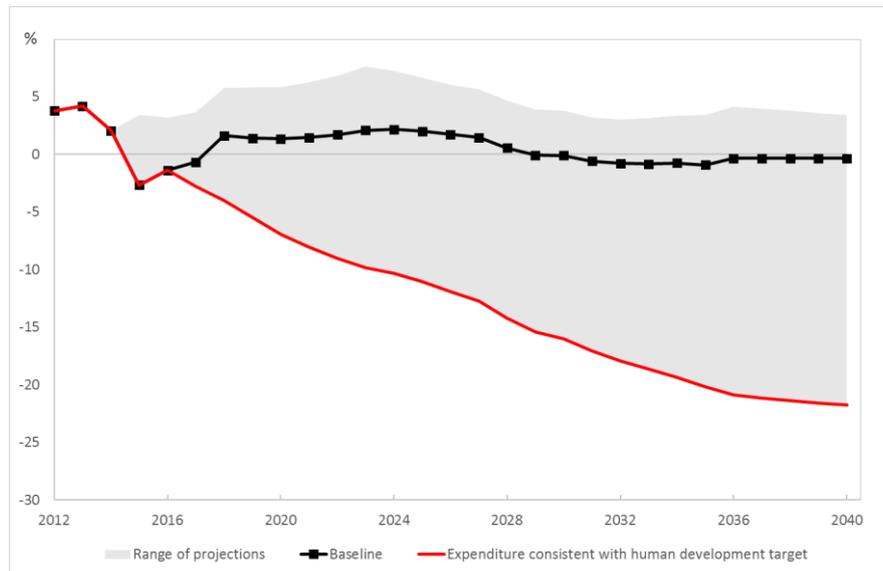
Figure 40: Projected fiscal balances – Papua New Guinea



In the Solomon Islands, most fiscal scenarios result in substantial deficits. The baseline fiscal outcome is close to balance over the projection period, although the revenue assumptions underlying the baseline projections for the Solomon Islands are heavily dependent on continued resource-related flows and a successful transition from logging to mining, around which there is significant uncertainty. A reversion to historical average expenditures would lead to slightly higher deficits by 2040 while the human development scenario would lead to unsustainable deficits from the early 2020s onwards. To the extent that the Solomon Islands is unable to

improve the quality of its public spending, the fiscal pressures associated with the achievement of targeted development outcomes would be substantially greater again.

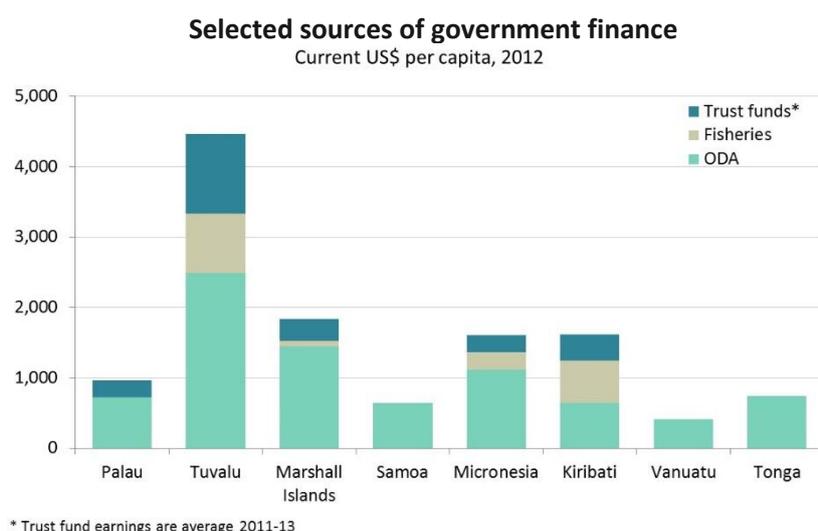
Figure 41: Projected fiscal balances – Solomon Islands



c. Trust Funds

Five of the smaller PICs—Palau, FSM, RMI, Kiribati, and Tuvalu—have sizeable trust funds, withdrawals from which will also play an important role in financing public expenditures over the projection period (Figure 42)²⁴. Of these five PICs, the trust funds in FSM, RMI and Palau were established and financed as part of the Compact of Free Association with the United States, with their main purpose to provide a source of budget finance to replace Compact grants upon their scheduled expiry in 2023. Kiribati’s Revenue Equalization Reserve Fund (RERF) was originally capitalized using tax revenues from now-depleted phosphate reserves, while the Tuvalu Trust Fund was established with contributions from the Tuvalu government and external donors. In both cases, these funds are now also being used to manage revenues from fishing license fees, which have grown rapidly in recent years. Papua New Guinea has also recently legislated a sovereign wealth fund to manage its resource revenues, although it is not yet operational.

²⁴ In Tonga, partly due to poor management, a previously established SWF which contained revenue from the lease of Tongan satellite space has been fully depleted. SWFs have not been established in Fiji, the Solomon Islands, Samoa or Vanuatu.

Figure 42: Contribution of trust fund flows to government resources

These funds – which are all invested in foreign financial assets – are intended to help the PICs achieve a measure of budgetary self-reliance over the longer-term, while also providing a mechanism for stabilization in response to downturns or external shocks.²⁵ Table 5 provides a summary of the stated objectives of the SWFs in the Pacific. Overall, the role of these funds is expected to become more important given the scheduled end of Compact grants and the ongoing prospects for large fisheries-related revenue flows in some PICs. However, in many cases, a sustained fiscal consolidation will be required to stabilize the asset base of these funds and ensure their longer-term sustainability.

Table 5: Pacific Trust Funds

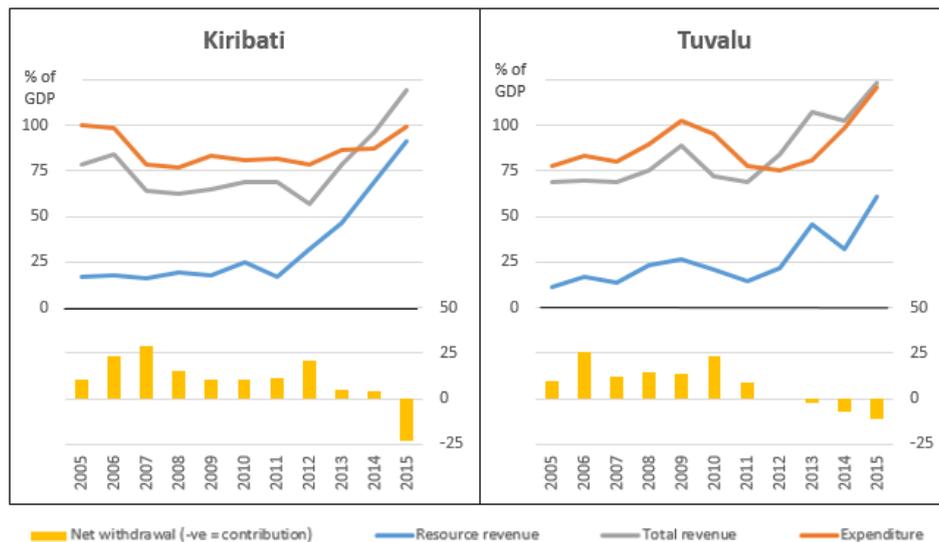
SWF	Est.	Capital source	Capital amount	Objectives	Background and contribution & withdrawal rules
Kiribati Revenue Equalization Reserve Fund (RERF)	1956	Phosphate tax revenues, fishing revenues	Initial capital = A\$0.6m Current capital = A\$578.9m (358% of GDP)	Savings and stabilization	The RERF was established in 1956 during the United Kingdom's colonial administration of the Gilbert (now Kiribati) and Ellice Islands (now Tuvalu). The RERF was capitalized using tax revenues from now exhausted phosphate mining royalties, and aims to help balance the government's future recurrent budget. There is no formal contribution rule, although the RERF is intended to receive budget surpluses. There are also no formal withdrawal rules.
Tuvalu Trust Fund (TTF)	1987	Bilateral grants	Initial capital = A\$27.1m Current capital = A\$115.1m (332% of GDP)	Savings	The TTF was established in 1987 with contributions from the Tuvalu government and external donors including Australia, New Zealand, and UK. The TTF aims to provide a source of recurrent revenue to the government. There is no formal contribution rule, although the government can make contributions from budget surpluses. The TTF makes transfers to the Tuvalu CIF (see below) only when the market value of the TTF exceeds the real

²⁵ This section draws substantially on Edwards (2016), Box I.C.1 Sovereign Wealth Funds in Small Commodity-Dependent EAP Countries, *East Asia and Pacific Economic Update*, October.

					maintained value (indexed to the Australian CPI).
Tuvalu Consolidated Investment Fund (CIF)	1987	TTF transfers, fishing revenues	Initial capital = Current capital =	Stabilization	The CIF receives transfers from the TTF (when the balance exceeds its real maintained value), and a rule has been established so that all fishing revenues above the 3-year historical average are placed in the CIF. The CIF can be drawn on to finance budget deficits, but has a minimum target balance of 16 percent of the maintained (real) value of the TTF.
FSM Compact Trust Fund	2004	US CoFA grants	Initial capital = US\$62.2m Current capital = US\$198.5m (64% of GDP)	Savings and stabilization	In 1986 the United States entered into its original Compact of Free Association with FSM, RMI and Palau. As part of a more recent amendment to the Compact, the Compact Trust Funds (CTF) were created with contributions from the US and the governments in the North Pacific. The CTFs in FSM and RMI are designed to supplement US annual grant assistance in the long term and, more generally, to contribute to economic development and long-term budgetary self-reliance of these countries. The CTF for PLW was designed to be a sinking fund to last until 2045. See Annex 3 for contribution and withdrawal rules.
RMI Compact Trust Fund	2004	US CoFA grants	Initial capital = US\$32.0m Current capital = US\$132.7m (78% of GDP)		
Palau Compact Trust Fund	1994	US CoFA grants	Initial capital = US\$66.0m Current capital = US\$147.4m (67% of GDP)	Sinking fund to smooth adjustment to post-Compact era	
Papua New Guinea Sovereign Wealth Fund – Stabilization Fund	Legislation passed in 2015, not yet operational	Mining, petroleum revenues		Stabilization	The Organic Law states that contributions to the Stabilization Fund should include: 50 percent of mining and petroleum taxes, 60 percent of proceeds from sale of mineral/petroleum assets, 75 percent of any distribution from State-held interests in mining/petroleum projects, a proportion of mining/petroleum dividends due to the State, all withdrawals from the Savings Fund. Withdrawals shall not exceed the 5-year moving average of the ratio of mineral and petroleum receipts to non-resource receipts, multiplied by actual non-resource receipts two years prior to the drawdown fiscal year.
Papua New Guinea Sovereign Wealth Fund – Savings Fund	Legislation passed in 2015, not yet operational	Mining, petroleum revenues		Intergenerational equity	The Organic Law states that contributions to the Savings Fund should include: Any surplus of the Stabilization Fund after its balance reaches US\$1 billion, 40 percent of proceeds from sale of mineral/petroleum assets, 25 percent of any distribution from State-held interests in mining/petroleum projects, the remainder of mining/petroleum dividends due to the State, proceeds from the sale of any non-resources assets. No withdrawals from the Savings Fund are allowed until 2024. Transfers to the Stabilization Fund are limited to those that ensure that the inflation-adjusted value of the Savings Fund is maintained.

PIC trust funds have played an important role in financing budgetary gaps, as well as playing a macroeconomic stabilization role in some cases. In Kiribati and Tuvalu, governments have readily drawn down TF balances to finance fiscal deficits over the past decade, and more recently have begun to make contributions on the back of marked increases in fishing license fee revenues (Figure 43). Drawdowns from TFs have also enabled PIC governments to increase public spending in response to external economic shocks such as the GFC, which led to pronounced reductions in growth and domestic revenues in Tuvalu and the North Pacific countries²⁶.

Figure 43: Revenues, expenditures, and net TF withdrawals (withdrawals less deposits)



However, the ability of these trust funds to stabilize the economy is partly contingent on their withdrawal rules. In some cases, relatively rigid withdrawal rules have also led to the accumulation of short-term debt and/or arrears after negative economic shocks (e.g., Palau, Tuvalu). Other countries such as Kiribati allow discretionary transfers from their wealth funds to their budgets. While discretion allows more flexibility, it can also come at a cost. For instance, in Kiribati, the funding of persistent fiscal deficits and low returns on investment halved the value of the RERF between 2000 and 2008, calling into question the longer-term savings objective (see below).

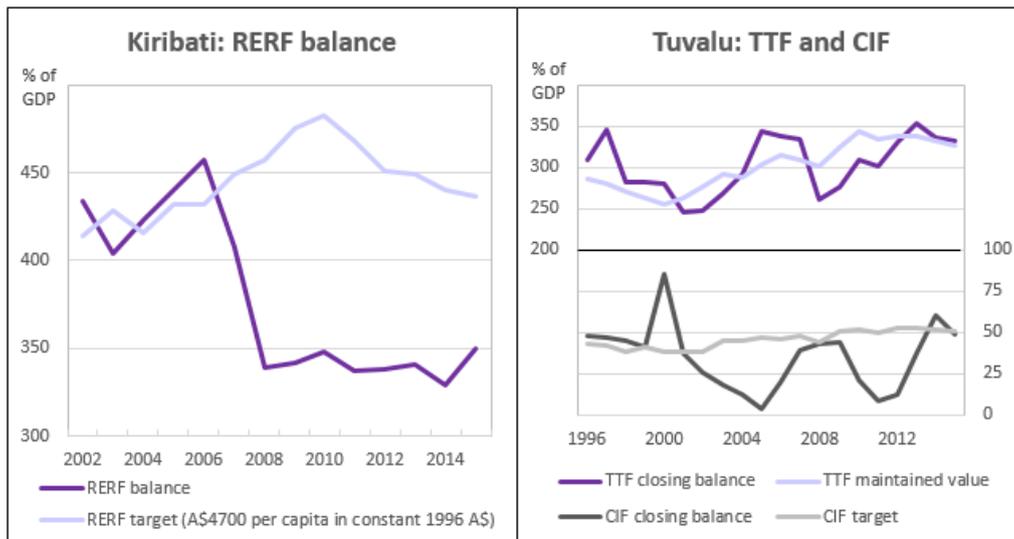
Accumulation rules are typically less clear and contributions to trust funds are usually ad hoc. In several cases, the recent upturn in revenues attributable to rents from fishing has led to TF contributions or reductions in debt that have been much smaller. In Kiribati, only around half of the large fiscal surpluses of recent years has been allocated to the RERF (the remainder has been saved as cash reserves). Discretion around contributions to TFs can also leave open a window for pro-cyclical spending: for instance, in the Marshall Islands an upturn in fisheries revenues has funded a continued increase in transfers to SOEs, rather than being saved.

In general, the operation of most Pacific TFs has not been fully compliant with savings rules and objectives, calling their longer-term sustainability into question. Savings rules are sometimes calibrated to maintain the real value of the SWF over time, to ensure that future generations can also benefit from current resource

²⁶ The GFC also saw these Trust Funds lose on average 12 percent of their asset value, and investment income fall in the subsequent years.

revenues or aid flows. Nevertheless, despite a substantial decline in the real per capita value of the Kiribati RERF in the mid to late 2000s, annual withdrawals continued until 2014 (Figure 44). On the other hand, in Tuvalu, the TTF rules—which do not allow transfers directly to the budget, and only allow transfers to the CIF when the TTF exceeds its target real value—have been and continue to be effective in ensuring that the fund maintains its value in real terms. Nevertheless, the CIF, which has regularly been used to finance budget deficits, has previously fallen to very low levels and has at times required donor injections to maintain a positive balance.

Figure 44: TF balances and withdrawals



In some cases, there may be an argument to spend rather than save resource revenues in trust funds, but this will depend on the extent of development needs and the quality of the spending that is financed. Using resource revenue for development expenditure – even if that means running down the value of the trust fund – may be justified if this expenditure generates a long-term social return that exceeds the fund’s investment return (on a risk-adjusted basis). This is more likely to be the case in those countries where development needs are particularly pressing. There may also be a case for using resource revenues for current spending, rather than development spending or saving, especially in relatively low-income countries, if future generations are expected to be wealthier than the current generation or if resources are projected to provide a steady long-term source of revenue. But in both cases, ensuring the quality of expenditure is key, and project selection should be underpinned by a clear assessment of social and economic benefits.

In Papua New Guinea, questions have arisen around the contribution and withdrawal rules of the proposed SWF, as well as the relationship with fiscal policy. Passed in 2015, the SWF legislation has some best-practice features: it ensures that all Fund inflows and outflows are recorded on-budget, mandates that the Fund invests only in foreign assets, and sets out a governance structure to prevent conflicts of interest. However, the contribution rules do not account for all resource revenues: for instance, the legislation requires only 50 percent of mineral and petroleum taxes to be transferred to the SWF. The withdrawal rule is complex and not clearly counter-cyclical in all circumstances. There is also no explicit link between the SWF rules and the broader fiscal policy framework, potentially weakening the traction and support for these rules. Moreover, it is not clear whether and how the rules determining the respective contributions of resource revenues to the Savings Fund and the Stabilization Fund have been calibrated to serve the objective of intergenerational equity.

Overall, experience suggests that PIC trust funds are most effective when the operational rules are simple, transparent, allow only limited discretion, and are supported politically. In Tuvalu, the robust governance structure of the TTF—with two of the three Board seats occupied by representatives independent of government—has helped ensure that its real value has been maintained over time. In Kiribati, on the other hand, the government has avoided introducing formal rules governing TF contributions and withdrawals, in part because SWF withdrawals are viewed as politically costly, creating an incentive to avoid saving in the TF in the first place. In Papua New Guinea, the established TF rules appear overly complex and not closely integrated with the overall fiscal framework, and the extent of the political commitment to implement these rules is not clear.

Trust Fund Scenarios

Two scenarios are used to project the contribution of trust funds to PIC government finances. The first ‘status quo’ scenario incorporates business-as-usual rules and practices relating to contributions and drawdowns, while the second is a ‘sustainability’ scenario under which the PICs maintain the per capita real value of their trust-fund assets. The implementation of these scenarios is detailed in Annex 3. In both cases, flows to and from TFs are modelled depending on the projections of the fiscal balance after accounting for expenditures, domestic revenues, and grants.²⁷ As we have seen, combining these scenarios results in up to nine trajectories for the budget balance in each country.²⁸ To keep the number of scenarios manageable, for each country the two trust fund scenarios are applied to the maximum, minimum, and baseline budget balance trajectories of these nine.

i. Status quo scenario

The status quo scenario projects TF contributions and withdrawals based on the way that each fund currently operates, including any rule-based limits/targets. This scenario indicates – given the possible outlook for domestic revenues, expenditures, and grants – how the financing gap for these countries might evolve once TF flows are included. It also demonstrates how viable current SWF drawdown approaches are in the long run.

ii. Sustainable scenario

In the sustainable scenario, the PICs maintain the real per capita value of the combined funds available for drawdown across all related SWF accounts. For Kiribati, Tuvalu, and Palau, per capita targets are benchmarked to total fund levels as at end of 2015. For RMI and FSM, each of which will continue to receive large US compact grants (and TF contributions) until 2023, the per capita target is fixed to the expected value of the fund at the end of 2023. The different treatment of RMI and FSM owes to the legislated limits on any drawdowns prior to 2024, which are intended to build up the reserves of their trust funds before the expiry of general Compact grants.

The target maintained value in the sustainable scenario is not intended to imply that current TF balances are at “optimal” levels. Instead, the sustainable scenario simply addresses the question of whether TFs are

²⁷ Investment returns for each TF are set equal to 6 percent per annum.

²⁸ The nine fiscal trajectories result from the baseline revenue projections combined with three expenditure scenarios combined with three grant aid scenarios.

able to finance deficits while maintaining their per capita real value, thereby preserving their sustainability over the long-term.

d. The bottom line - Kiribati, Tuvalu, FSM, RMI, Palau

The scenarios outlined above result in a range of fiscal projections for each of the trust fund PICs – Kiribati, Tuvalu, and three North Pacific Compact countries. These projections are illustrated in the charts presented below. For each country, the first chart in the horizontal panel (Figure 45 for Kiribati) depicts the most positive, most negative, and baseline budget balance from among the nine fiscal scenarios (after accounting for domestic revenues, grants, and expenditures), providing an indication of the range of possible fiscal outcomes before accounting for trust fund flows. The second and third charts depict the budget balances that result once each of the two trust fund scenarios described above – status quo and sustainable – are applied to these three budget trajectories. These scenarios allow for a dynamic assessment of public finances, insofar as they allow surpluses to be saved in the TFs, and deficits to be financed – fully or partially – by TF drawdowns. The implications of these deposits and withdrawals for trust fund asset balances are then illustrated in the following figure (Figure 46 for Kiribati). The final figure (Figure 47) summarizes the range of projected fiscal outcomes, assuming that the real per capita value of the trust fund is maintained.

i. Kiribati

Excluding trust fund flows, the range of possible fiscal outcomes for Kiribati is wide, reflecting the importance of aid flows. While baseline revenues, expenditures, and grants imply a fiscal gap (excluding trust fund flows) of around 25 percent of GDP in 2040, this result is highly aid dependent: either of the two alternative aid scenarios would shrink this gap, with the constant aid-to-GDP scenario implying a gap of only around 5 percent of GDP in 2040. A reversion to historical expenditures would also improve the budget position markedly. On the other hand, due to Kiribati's substantial development needs and severe geographic constraints, the development expenditure scenario implies a large fiscal gap through the projection period, which are not offset even by best-case outcomes for aid.

While the RERF could finance the baseline fiscal gap through to 2040, this would require a reduction in the per capita value of fund assets, while financing development expenditures would exhaust the fund within the projection period (Figure 46). On the other hand, holding aid-to-GDP ratios at current levels and realizing revenue opportunities in fisheries (discussed in the next section) could, together with RERF flows, allow Kiribati to sustainably finance the development spending scenario. The IDA scale-up, which is already projected to boost the baseline outlook for grant aid by around 8 percentage points of GDP per year in 2040, should also help in this regard. Contingent on ensuring absorptive capacity and the quality of expenditure, therefore, a commitment on aid from development partners and sustained efforts on fishing revenues could allow Kiribati to achieve better development outcomes, despite the severe challenges it faces.

Figure 45: Kiribati fiscal balances – before trust fund flows, under the status quo TF scenario, and under the sustainable TF scenario

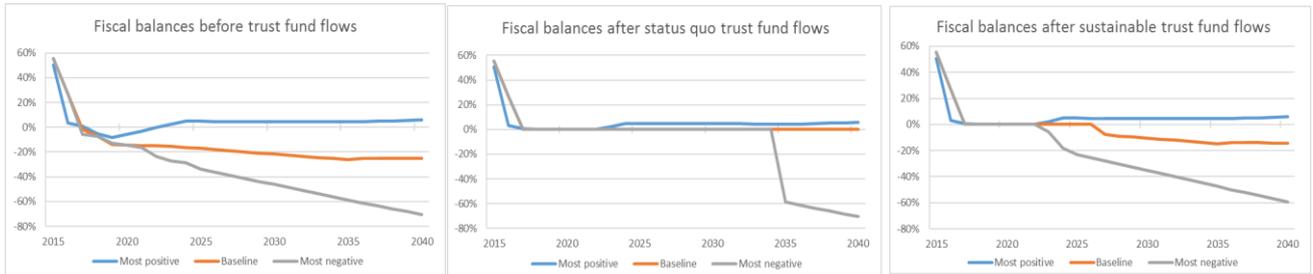


Figure 46: Kiribati RERF balances – under the status quo TF scenario, and under the sustainable TF scenario

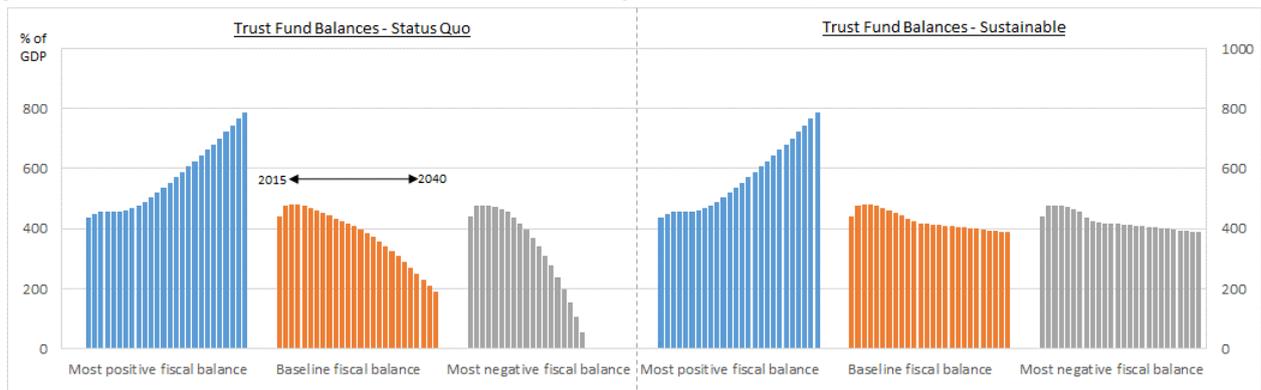
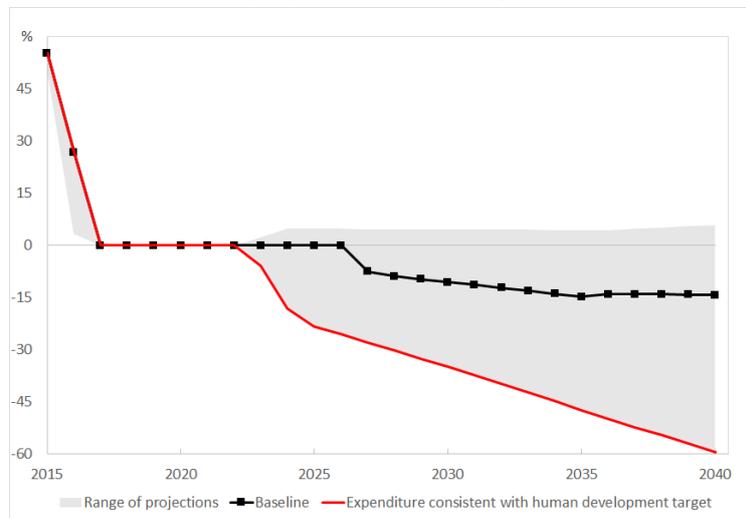


Figure 47: Kiribati fiscal projections assuming trust fund sustainability



ii. Tuvalu

As in Kiribati, there is a wide range of possible fiscal outcomes (before accounting for trust fund flows) in Tuvalu, again reflecting the relative importance of aid and fishing license fees. While baseline revenues, expenditures, and grants imply a fiscal gap of around 9 percent of GDP in 2040, this result is highly aid dependent: the constant aid-to-GDP scenario would result in surpluses from the early 2020s onwards. Relative to the baseline, a reversion to historical expenditures would also improve the fiscal position, as in Kiribati.

On the other hand, the human development scenario for spending does not imply a larger fiscal gap in Tuvalu, relative to the baseline. This is in part because public expenditure in Tuvalu is already relatively high

in per capita terms. Nevertheless, this result is also reliant on Tuvalu boosting the effectiveness of its public spending, which is relatively low according to the analysis in Section 2. If it is successful in doing so, the extra spending requirements associated with meeting the human development target would be minimal, and in fact imply a reduction in public spending as a percentage of GDP by 2040. However, if Tuvalu is unable to bring the effectiveness of its public spending in line with the developing small state average (controlling for its substantial geographic constraints) the spending requirements associated with the development scenario would be considerably higher.

The TTF and CIF can fully finance budget deficits in the baseline scenario and in all other scenarios, while increasing in real per capita value. Hence the long-term fiscal outlook is broadly positive, in part due to the sound financial management of the TTF to date. There is also considerable upside associated with fishing revenues and aid. On its own the scale-up in available IDA resources could increase grant aid by over 30 percentage points of GDP in 2040 (not included in these projections). Nevertheless, there remains a need to focus on the quality and efficiency of public expenditure in Tuvalu, which may also be subject to an ‘ultra-small state’ premium²⁹, in addition to the premia associated with dispersion and remoteness that are already captured by the model discussed in Section 2.

Figure 48: Tuvalu fiscal balances – before trust fund flows, under the status quo TF scenario, and under the sustainable TF scenario

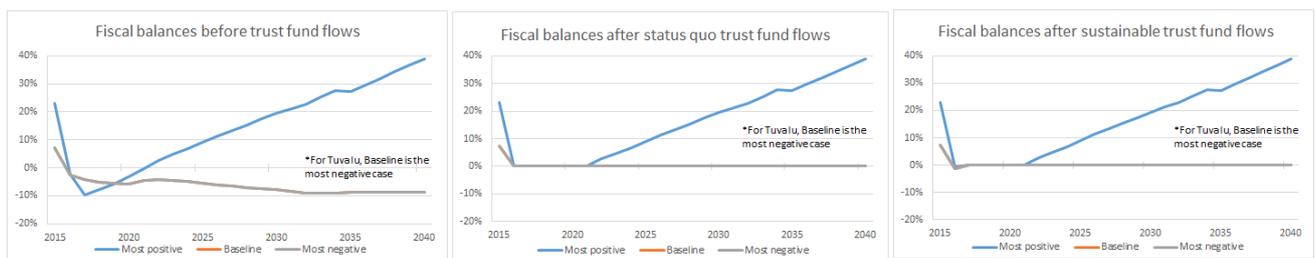
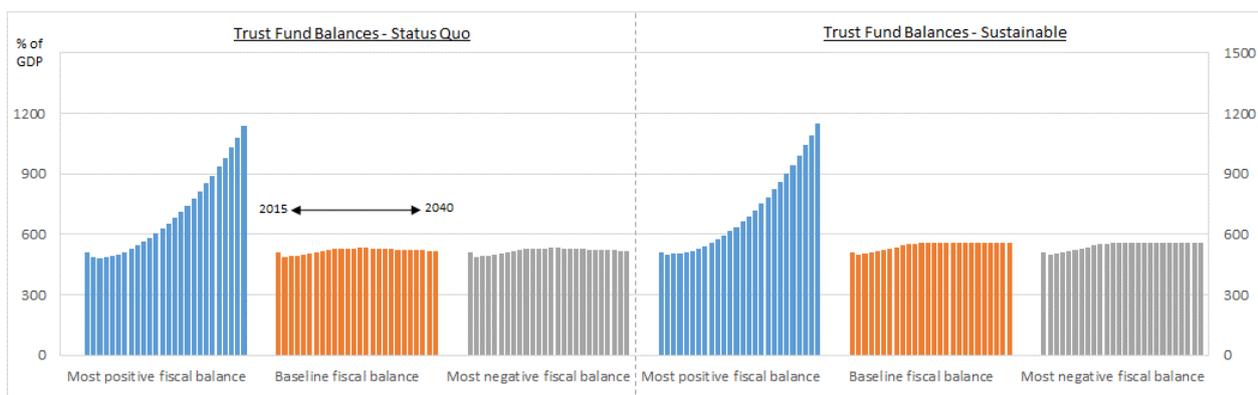
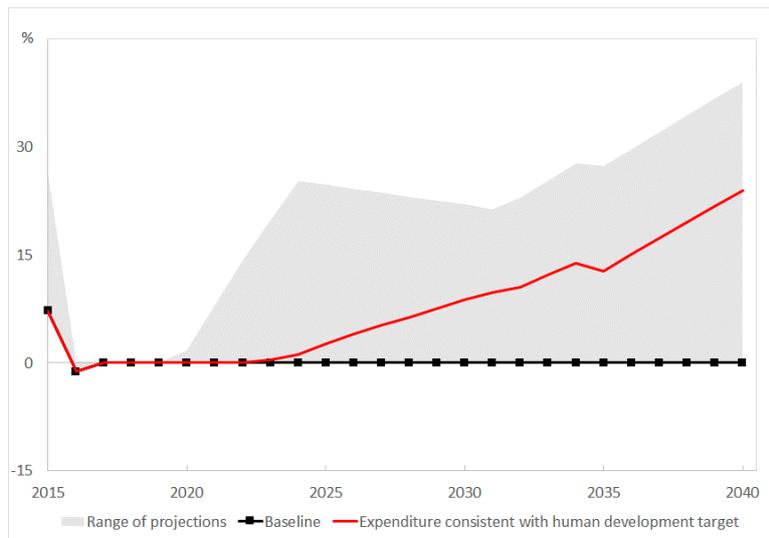


Figure 49: Tuvalu TTF + CIF balances – under the status quo TF scenario, and under the sustainable TF scenario



²⁹ In addition to issues associated with dispersion across islands, Tuvalu has a particularly small population, even compared with other small states, further increasing the difficulty of achieving economies of scale in public service provision.

Figure 50: Tuvalu fiscal projections assuming trust fund sustainability*iii. FSM*

Excluding trust fund flows, the baseline fiscal projections for FSM imply a fiscal gap of around 12 percent of GDP in 2040, with the various scenarios resulting in gaps ranging from 6 to 40 percent of GDP. Alternative aid scenarios have a relatively small impact, primarily because the path of US grants – which is known with some certainty – is fixed in these scenarios. A reversion to historical expenditures would lead to a much higher fiscal gap (20-27 percent of GDP), and the development spending scenario would imply a higher gap again.

The CTF in FSM could fully finance fiscal gaps through to 2040 in the baseline scenario, under existing drawdown rules, but the real per capita value of the fund would decline. Alternatively, it could finance an increasing portion of the fiscal gap in the period from 2023-2040 while maintaining the real per capita value of the fund. But under the human development and historical expenditure scenarios, large deficits would remain in 2040, even after accounting for CTF flows. In large part this is due to the low growth projections for FSM, with real per capita incomes projected to decline over the next 25 years. As a result, the modelling suggests that expenditures would need to increase substantially as a proportion of GDP to be consistent with the human development target. In the absence of an improvement to the growth outlook, an increase in aid would likely be needed to allow FSM to undertake development-enhancing public expenditures while preserving the capital of the CTF. The IDA scale-up, which is projected to boost grant aid by around 5 percentage points of GDP per year in 2040, should help to finance a portion of this spending.

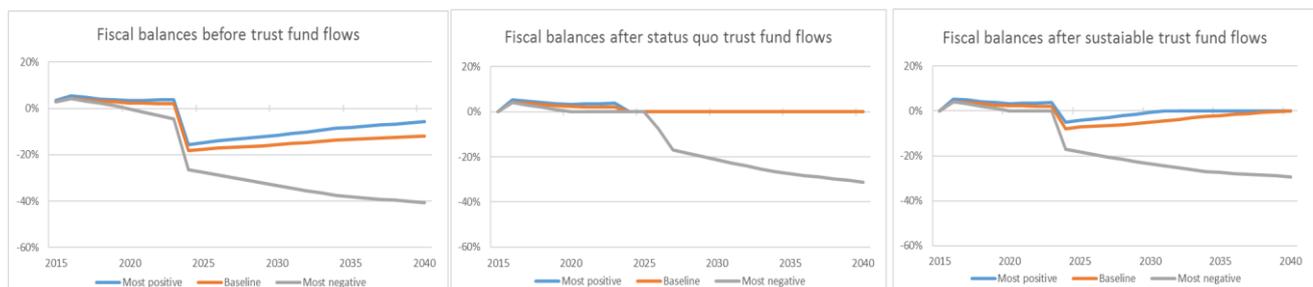
Figure 51: FSM fiscal balances – before trust fund flows, under the status quo TF scenario, and under the sustainable TF scenario

Figure 52: FSM CTF balances – under the status quo TF scenario, and under the sustainable TF scenario

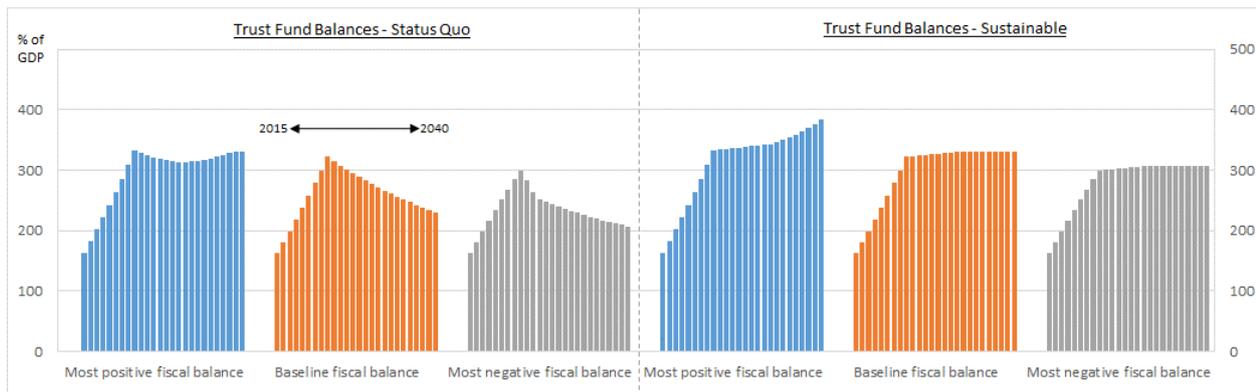
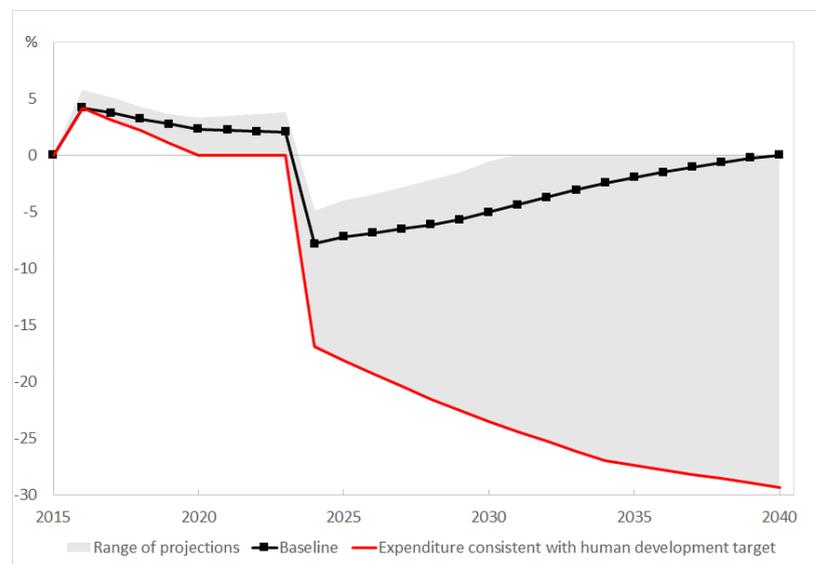


Figure 53: FSM fiscal projections assuming trust fund sustainability



iv. RMI

As in FSM, the projections for RMI imply a baseline fiscal gap (excluding trust fund flows) of around 12 percent of GDP in 2040, around which the various scenarios yield a narrower range of deficit outcomes, ranging from 8 to 23 percent of GDP. Again, alternative aid scenarios have only a minor impact (3-4 percent of GDP in 2040) as the path of US grants is fixed in these scenarios. A reversion to historical expenditures would lead to a larger fiscal gap (14-18 percent of GDP).

Although the growth in real per capita public spending required to reach the HDI target in the human development scenario is higher for RMI than for FSM, compared with the baseline the human development scenario only adds modestly to fiscal pressures in RMI. This is because the baseline growth outlook for RMI is stronger than for FSM, with average annual real per capita growth of 0.7 percent projected from 2015 to 2040. This in turn implies that the required increase in real per capita public spending over the next 25 years is smaller as a proportion of GDP.

The RMI CTF does not have the capacity to fully finance baseline budget deficits over the next 25 years, either under existing drawdown rules or in the sustainable trust fund scenario (maintaining the real per capita value of the fund). RMI therefore faces a slightly different set of issues to FSM: while positive economic

growth is projected to provide a growing revenue base which could potentially help to finance development needs, the assets in the RMI CTF are insufficient to finance even baseline deficits while complying with the existing drawdown rules or maintaining the real per capita value of the fund’s assets. The projected boost to grant resources of around 8 percent of GDP in 2040 associated with the IDA scale-up will be critically important in helping to close this financing gap.

Figure 54: RMI fiscal balances – before trust fund flows, under the status quo TF scenario, and under the sustainable TF scenario

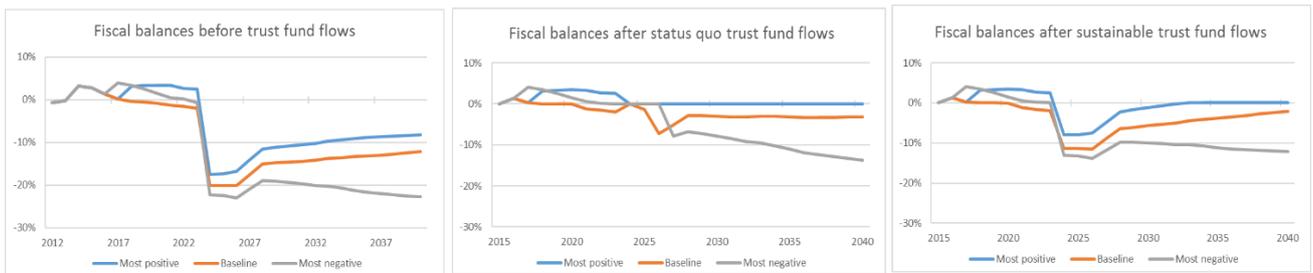


Figure 55: RMI CTF balances – under the status quo TF scenario, and under the sustainable TF scenario

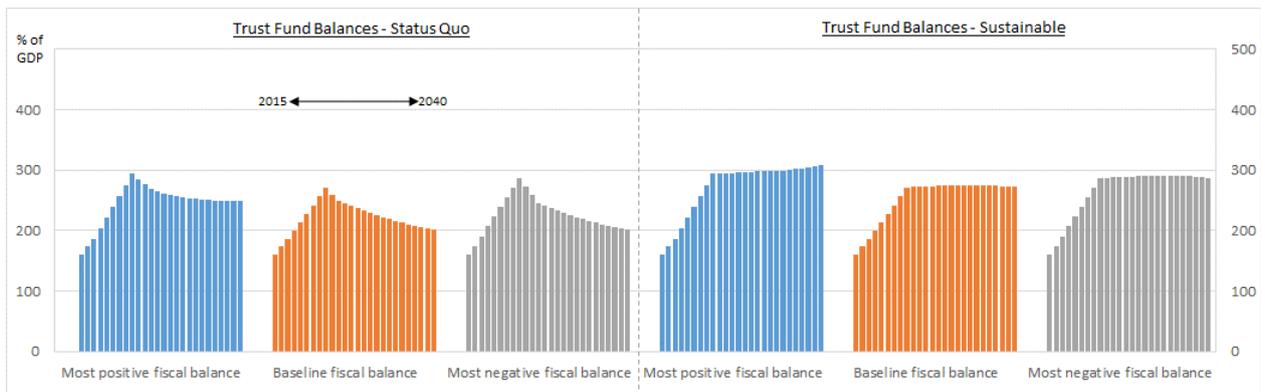
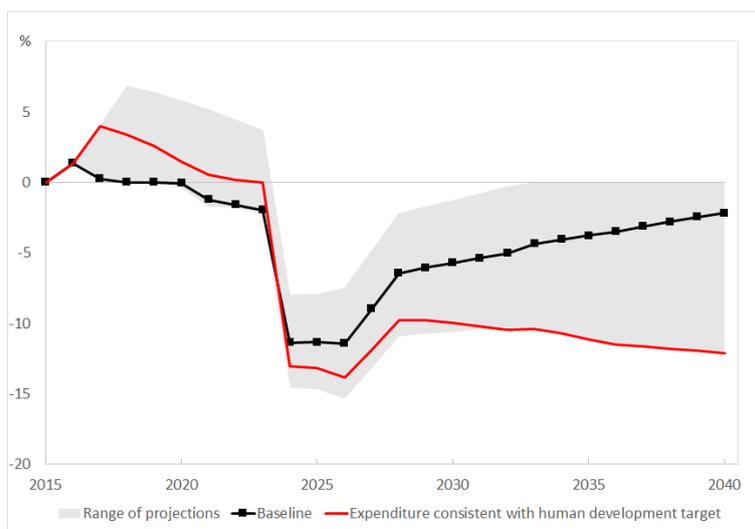


Figure 56: RMI fiscal projections assuming trust fund sustainability



v. Palau

Excluding CTF flows, the various scenarios for Palau imply a fiscal gap that increases to between 8 and 18 percent of GDP in 2040. The baseline projection is for a gap of around 8 percent of GDP in 2040. Like in the other two Compact countries, the alternative aid scenarios only have a small impact, while a reversion to historical expenditures would lead to higher deficits (around 13 percent of GDP). Meeting the human development target would lead to still higher deficits of a little over 18 percent of GDP.³⁰

The Palau CTF does not have the capacity to fully finance budget deficits through to 2040 under any of the modelled scenarios. Deficits of 5-7 percent of GDP persist under baseline assumptions for revenues, grants and expenditures (and are similar even in the best case). Like in RMI, therefore, the assets in the Palau CTF are insufficient to finance projected deficits, either while complying with the existing drawdown rules or while maintaining the real per capita value of the fund’s assets.

Figure 57: Palau fiscal balances – before trust fund flows, under the status quo TF scenario, and under the sustainable TF scenario

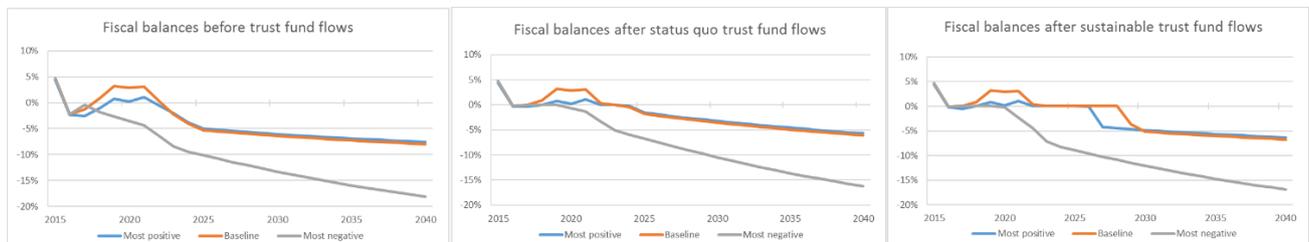
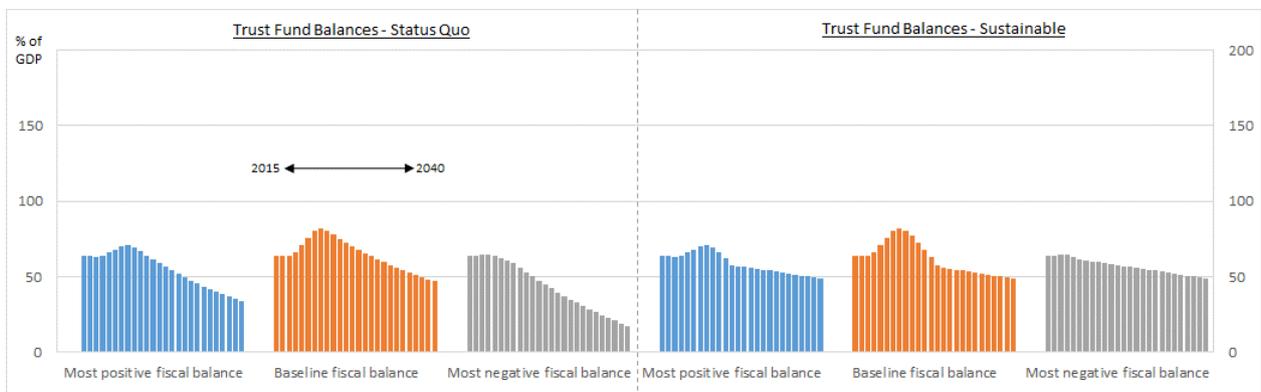
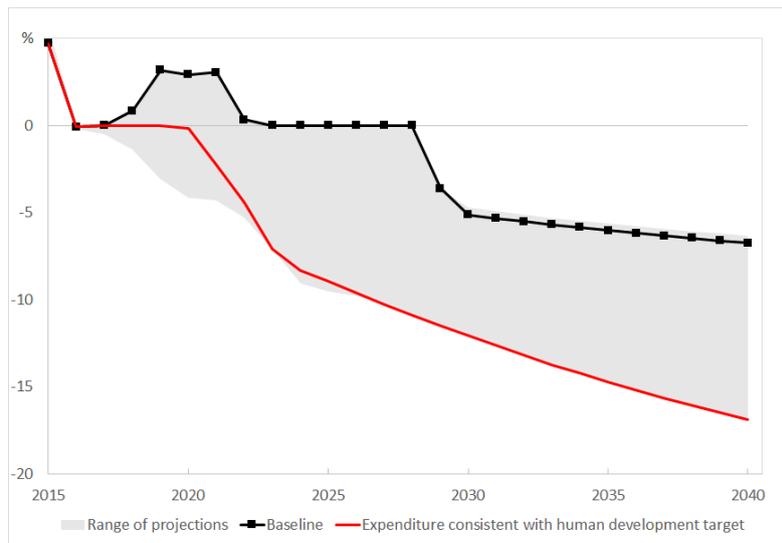


Figure 58: Palau CTF balances – under the status quo TF scenario, and under the sustainable TF scenario



³⁰ Recall that the human development target for Palau (as well as Tonga, Samoa, and Fiji) is set higher than for the other PICs, consistent with its stronger starting point.

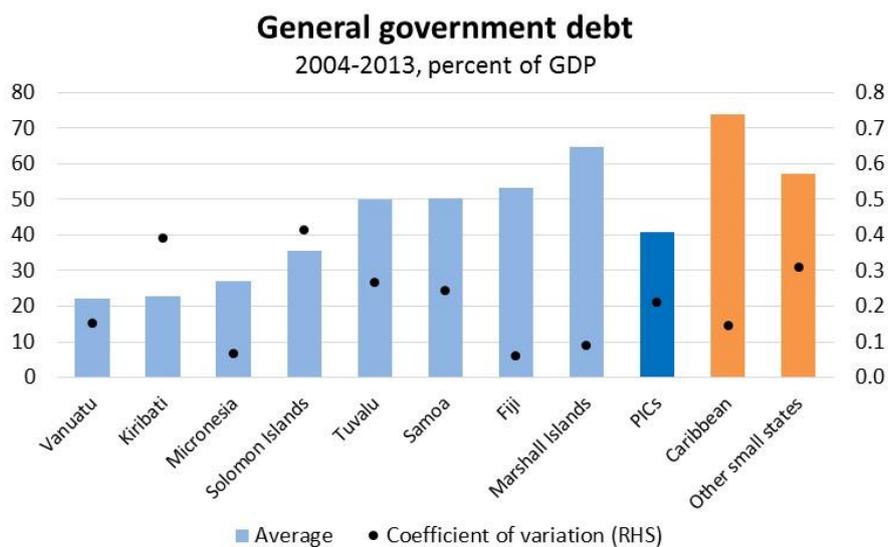
Figure 59: Palau fiscal projections assuming trust fund sustainability



e. The role of debt

As is the case in many small states, maintaining debt sustainability has been a challenge in the Pacific. The generally elevated risks of debt distress among the small PICs do not result from high debt levels per se, but rather from slower growth, persistent budget deficits (even in ‘normal’ times) and frequent external shocks, including from natural disasters (Figure 60). That said, the volatility of PIC debt ratios over the past decade has generally been in line with other small states, possibly reflecting the stabilizing effects of external support and trust funds (see Section 5).

Figure 60



In general, the PICs face substantial constraints in their capacity to take on new debt financing, particularly if it is not provided on concessional terms. This is primarily due to the macroeconomic characteristics common to the PICs, including low potential growth rates and structural gaps between domestic revenues and

spending. In some cases, the important role of SOEs and government guarantees also mean that PIC governments carry large contingent liabilities. Vulnerability to natural disasters further decreases debt carrying capacity, insofar as it gives rise to the need to maintain higher fiscal buffers so that PICs can respond when disasters hit, and rebuild in the aftermath. Moreover, due to the geographic constraints faced by the PICs (e.g. difficulties in achieving economies of scale), many potential investments may be less likely to have an economic rate of return sufficient to exceed the cost of borrowing, even if justified by higher social returns.

These factors mean that several PICs are considered to be at a high or moderate risk of debt distress, even though their debt-to-GDP ratios are below those observed in other small states. According to the latest IMF-WB Debt Sustainability Analyses (DSAs), five of the small PICs are currently classified as at high risk of debt distress (FSM, RMI, Kiribati, Tuvalu, and Samoa), and two are classified at moderate risk (Tonga and Vanuatu). Of the larger PICs, the Solomon Islands is at a moderate risk of debt distress and Fiji is a “low scrutiny country” based on the latest available DSA for market-access countries (MAC-DSA). Despite generally lower debt ratios in the PICs, these results are broadly in line with those of small states. Across all small states, about two-thirds are categorized at “high risk” of debt distress based on the latest debt sustainability analysis or “higher scrutiny” based on the MAC-DSA. By contrast, only about one-in-seven small states are categorized as “low risk” or “lower scrutiny”.

In the high-risk countries, the question of debt sustainability is closely linked with the evolution of trust fund assets. In the Compact countries, the main issue is whether the level of CTF assets in 2023 will generate investment income sufficient to replace expiring Compact grants without disruption to public expenditure or erosion of CTF capital. Recent DSAs for the Compact countries have highlighted that in the absence of fiscal consolidation, the real value of the CTFs is likely to decline from 2023 onward, with real investment returns insufficient to compensate for the reduction in grants. This is also consistent with the analysis presented above.³¹

For the PICs at a high risk of debt distress, additional borrowing even on concessional terms may be ill-advised. By definition, these countries already have debt at levels which are consistent with a material probability of debt distress and default. The risks associated with further borrowing in the high risk countries are acknowledged by WB and ADB lending rules, which ensure for instance that IDA countries classified at a high risk of debt distress receive financing on grant terms.³² However, many of the PICs at high risk of debt distress are also most in need of additional sources of financing.

For those PICs at a moderate risk of debt distress, some debt may be justified, but as a general rule borrowing should be on concessional terms. This is recognized by the medium-term debt strategies currently in place in Samoa, Tonga, and Vanuatu, each of which commits the respective governments to only contracting new borrowing on concessional terms (i.e. with a grant element of 35 percent or above), with the aim of ensuring that the overall debt burden remains at sustainable levels.

Even borrowing on concessional terms may be problematic for countries rated at a moderate risk of debt distress, in part because standard debt sustainability analyses may not adequately capture risks to the PICs.

³¹ And in particular the historical expenditures scenario for each of the Compact countries, in which – by assumption – there is no expenditure consolidation relative to the fifteen-year historical average.

³² Due to the particular vulnerabilities facing small island developing states, most of the PICs are classified as IDA countries under the ‘small islands exception’ despite having per capita incomes well above the IDA threshold.

In particular, the PICs' vulnerability to natural disasters and other external shocks would tend to imply that they will generally be more vulnerable to debt distress than a country that has a similar macroeconomic outlook but faces a more stable external environment. This is partly because debt is more likely to spike due to the financing needs associated with a natural disaster. Moreover, the associated debt also tends to be less growth enhancing; while in other economies increases in debt typically lead to increases in the capital stock and thus enhance the growth outlook, for many of the small island states sharp increases in debt to finance reconstruction needs after natural disasters only help to rebuild lost capital. On the other hand, the availability of external support from development partners in the wake of such external shocks has helped to offset these extra vulnerabilities. Efforts are now being made in the DSAs to better account for the average annual effect of natural disasters on the baseline growth and fiscal outlook (this accounted for the recent reclassification of Samoa from a moderate to a high risk of debt distress).

For all PICs, a cautious approach to public borrowing is also advisable given many investment proposals are likely to have relatively low economic returns. In a narrow theoretical sense, public investments are justifiable if they generate risk-adjusted economic returns higher than the cost of capital. However, in the PICs, returns on many public investments are likely to be relatively low, for the same reasons that economic growth rates are relatively low. The constraints to investment posed by the return-limiting combination of small domestic markets, costly world trade, and increasing returns to scale in industry and public administration are widely acknowledged in the theoretical literature (e.g. Murphy, Shleifer and Vishny 1989, Krugman 1991). Some public infrastructure may have important effects on social welfare but generate little in the way of economic returns that could result in an increase in public revenues sufficient to service the debt.

On the other hand, while the small PICs generally have a lower capacity to take on new debt than other countries at similar levels of development, this does not imply that debt-funded capital expenditure cannot form an important part of some small PICs' development strategies. As we have seen, the level of grant aid that PICs are able to access from development partners has in many cases been insufficient to match their large and pressing infrastructure needs. In PICs like Vanuatu and the Solomon Islands – where the risk of debt distress is moderate, the outlook for growth is relatively strong, and development needs are greater – modest increases in debt-funded capital spending may therefore be more justified.

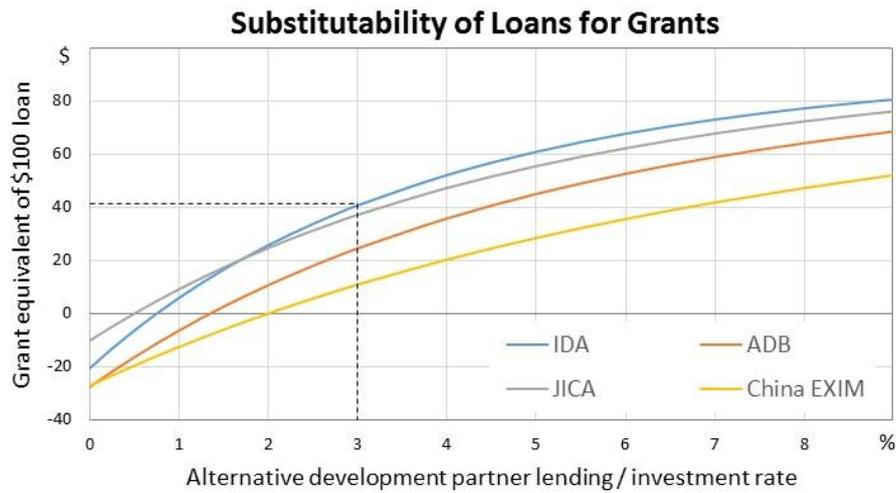
To take advantage of productive investment opportunities while maintaining aggregate debt sustainability, it is important that the PICs have robust rules around the contracting of new debt. As a first step, PIC governments should adopt procedures that require an evaluation of the economic returns associated with proposed debt-funded projects, and the national capacity to complete the project to the required standard. Given the uncertainties inherent in such exercises, estimates of economic returns should be conservative. As well as accounting for the effect on the baseline outlook for debt, budget balances, and growth, evaluations of new loan proposals should also consider whether the fiscal space necessary to respond to natural disaster scenarios and/or other exogenous shocks is preserved (taking into account the extent to which donor support is also likely to respond in these cases). On the funding side, grants should be drawn upon where possible, with priority then given to concessional sources of financing. Given that some projects have very long payback periods, it is also important to account for the effects of debt servicing requirements on government cash flows. More generally, PIC governments should have systems in place to effectively identify, prioritize, and implement public investment projects, and adopt procedures that ensure value-for-money in procurement and design.

Development partners may also be able to do more to help the PICs build fiscal buffers and lower their risk of debt distress, including by increasing the flexibility of financing terms. The PICs already receive World Bank and ADB financing on much more concessional terms than other countries at the same income level, due to the specific vulnerabilities they face as small island states subject to natural disasters and economic shocks. Moreover, the PICs will benefit from vastly expanded World Bank assistance in coming years under the IDA18 scale-up (Figure 34). Nevertheless, looking forward, there may also be scope for those development partners providing concessional loans to the PICs to explore options for further flexibility on the terms of their financing. PICs that currently receive highly concessional loans (including WB and ADB borrowers at a moderate or low risk of debt distress) from development partners could benefit from being allowed more say over their financing terms, depending on country needs and their debt situation.

As a specific suggestion, for any given available financing envelope, client countries could determine the mixture of loans and grants that they receive, holding the *present value* of the available finance fixed. Figure 61 shows how the grant-equivalent (or present) value of concessional loans is affected by the relevant lending rate. For a development partner able to lend/invest at 3 percent, \$100 of credits is equivalent to about \$40 of grants. Hence a PIC at a moderate risk of debt distress with an indicative IDA allocation of \$20 million would have the option of receiving \$12.1 million in grants rather than \$10 million in concessional credits and \$8 million in grants. Such flexibility would allow the PICs to take advantage of the full value of their allocations without necessarily increasing their debt burden. Moreover, such a system would involve no net financial imposition on donor resources, and 'residual resources' could in fact be leveraged to increase the (non-concessional) financing available to other countries. The grant equivalent value of any given credit would also increase in the event that global interest rates normalize. Alternatively, bilateral development partners already providing their aid on full grant terms could explore financing mechanisms (e.g. swaps) by which they could effectively convert loans from other development partners into grants.

For WB and ADB clients, there may also be some future scope to reduce the distorted incentives in the current financial allocation rules. Under present rules, PICs have some incentive to be classified at a high risk of debt distress because doing so allows them to receive 100 percent grant financing from the WB and ADB. A system in which the present value of the IDA allocation rises when risk of debt distress falls would ensure that PICs are financially incentivized to maintain more sustainable debt positions. In line with the proposal above, PICs at a low or moderate risk of debt distress would be allowed to choose their grant / credit mix in line with country needs.

Figure 61

**Lending terms:**

IDA credits at small island terms: 40 year maturity, 10 year grace, 0.75% p.a interest

ADB credits: 30 year maturity, 10 year grace, 1.35% p.a. interest

JICA loans: 30 year maturity, 10 year grace, 0.5% p.a. interest

China EXIM loans: 20 year maturity, 5 year grace, 2.0% p.a. interest

While the small PICs should generally focus on obtaining grants or highly-concessional loans, some of the larger countries in the region have the potential to raise funds on global markets. Fiji placed USD 200 million in five-year bonds in September 2015 at a yield of around 7 percent, effectively rolling over USD 250 million in five-year bonds that were previously issued in 2011 yielding 9 percent.

In Papua New Guinea, sovereign bond issuance could be beneficial but needs to be handled carefully. Global interest rates are low, and hence it is likely that PNG could issue global USD-denominated bonds at yields which are much lower than those currently being paid on domestic debt. As in many other PICs, domestic debt issuance tends to suffer from insufficient domestic appetite (and hence higher yields), with commercial banks already at the limits of their mandated holdings of government debt. On the other hand, sovereign bond issuance could provide a useful source of government finance and foreign currency liquidity. But sovereign bond issuance entails a number of risks that need to be managed. For instance, if unhedged against currency risk, a depreciation in the kina exchange rate could easily undo the reductions in financing costs obtained by issuing USD-denominated bonds at a lower yield than domestic debt.

More generally, to preserve fiscal space and maintain debt sustainability it is important to make full use of available concessional financing before turning to non-concessional sources. The yields paid by the Fijian government for global debt issuance are significantly higher than the financial cost of borrowing from development partners. To ensure that the *non-financial* costs of borrowing are minimized, development partners need to ensure that concessional loans are provided in a way that ensures country ownership and maximizes their effectiveness (see Section 5). Guarantees from development partners could also provide a useful way of helping the PICs make the transition from donor assistance to market-based finance.

f. Summing up and recommendations

While the scenarios for revenues, expenditures, grants and trust fund flows should only be taken as illustrative, they allow some broad conclusions about the outlook for PIC public finances. The scenarios for revenues, expenditures, and grants are best viewed as projections of future outcomes rather than forecasts. They are not all intended to be realistic – in particular, the significant deficits projected for some countries in some scenarios would not be sustainable and would in practice require substantial adjustment to fiscal plans – but they do provide a sense of the budgetary pressures that each PIC is likely to face.

For most PICs, the scope for substantial further gains in revenue mobilization appears relatively modest. The baseline domestic revenue projections suggest that further substantial increases are unlikely for most PICs, consistent with the fact that government revenues in most PICs (as a percentage of GDP) are already comparable with revenues in other small states and countries at similar stages of development. This implies that the scope for further gains would require most PICs to outperform their counterparts, and may end up being costly in terms of incentives for private sector investment and growth.

An exception is Vanuatu, which stands out as having relatively low rates of domestic revenue mobilization, while in Tonga and the Marshall Islands domestic revenue has also been slightly lower than cross-country benchmarks. There exist opportunities in each of these countries to boost the domestic revenue take as a proportion of GDP, as an important means of expanding the funding of public services necessary for development. Tonga in particular has already taken advantage of a number of these opportunities in recent years, while the baseline scenario for Vanuatu incorporates an ambitious outlook for domestic revenue mobilization, bringing it in line with cross-country averages over the next 25 years.

The baseline projections see expenditures declining from current levels (and historical average levels) for most of the PICs, but in some cases this would imply a substantial fiscal consolidation effort that may be hard to achieve. Government expenditures tend to be relatively high in the PICs, even compared with other small states. In part, this is because the public sector faces elevated import costs and is unable to take advantage of scale economies, and also because of the important role of many PIC governments as direct providers of employment, which can lead to elevated wage bills. At the same time, natural disasters periodically cause a substantial increase in spending needs associated with recovery and reconstruction. These factors justify government spending that is higher than small state averages, and can make fiscal consolidation challenging.

After controlling for geographic constraints associated with remoteness and dispersion, the effectiveness of public spending in several PICs – as measured by the development outcomes associated with a given level of public spending per capita – appears to be in line with or better than the developing small states average. At the same time, human development indicators remain relatively low in some of these PICs due to low levels of public spending and/or geographic constraints, implying that public expenditure must be raised if human development outcomes in line with small state averages are to be achieved.

On the other hand, the measured effectiveness of public spending is particularly low in the Solomon Islands, Papua New Guinea, Vanuatu, and Tuvalu. The modelling exercise conducted in Section 2 suggests that if these countries fail to improve the quality of their spending, the quantity of spending required to achieve a given set of development outcomes would be substantially higher than assumed here, putting additional pressure on public finances. Nevertheless, all the PICs have scope for some improvement in the effectiveness of their

public spending. Prioritizing continued improvements to public financial management and the efficiency of service provision – achieving more with the same amount of funding or less – is an important part of any response to the budget constraints that the PICs face.

The outlook for economic growth is an extremely important determinant of the PICs’ ability to meet the spending needs implied by the human development scenario. Growth is critical insofar as it leads to a larger tax base that can be drawn on to finance development needs, even in the absence of increases in the revenue take as a proportion of GDP. In the case of Solomon Islands, faster projected economic growth means that even substantially higher real per capita expenditures can be financed with relatively moderate increases in the ratio of public spending to GDP. In contrast, the case of FSM suggests that even relatively small absolute increases in spending may be difficult to manage when projections for overall growth are weak.

Even assuming best-case outcomes for revenues and expenditures, there will be a continued need for aid across the Pacific. For most countries, the current (baseline) projections of aid inflows fall below the scenarios in which aid is held fixed in real terms or as a proportion of donor GDP, reflecting an expectation that current levels of aid to the PICs may not persist over the longer-term. However, the modelling suggests that in most cases, aid may need to increase from current levels, to maintain fiscal sustainability and/or finance the spending needed to improve development outcomes. Even in relatively well-performing countries such as Samoa, the fiscal position can be critically affected by the decisions on aid made by major development partners. The scale-up in the availability of IDA resources to most PICs from mid-2017 onwards will form an important part of the development community’s response to these financing needs.

The scheduled end of Compact grants in 2023 will have a significant adverse effect on the North Pacific economies, in the absence of alternative sources of financial assistance. Without an improvement to the growth outlook, a substantial increase in aid (relative to projected levels) would likely be needed to allow FSM to undertake development-enhancing public expenditures while preserving the capital of its CTF. In RMI and Palau, on the other hand, alternative sources of aid may be required simply to prevent the emergence of unsustainable budget deficits even under business-as-usual spending projections.

Aid in the Pacific should be viewed as an essential component of an ongoing collaboration between the PICs and development partners to fill structural financing gaps, not as a short or medium-term ‘intervention’. Such a perspective facilitates a more realistic assessment of the effectiveness of aid in the region – not as a magic bullet that will necessarily lead to pronounced improvements in development indicators over the short and medium-term, but rather, as an ongoing source of financing, policy advice and technical assistance which allows the basic operations and responsibilities of government to be adequately funded and delivered. By this measure, aid-financed spending appears to be reasonably effective in several PICs, which achieve comparatively strong development outcomes given their level of public expenditure per capita (a relatively large proportion of which is financed by aid) and the geographic constraints that they face. Nevertheless, reliance on aid carries risks which it is important to minimize (see Section 5).

While trust funds will also play a significant role in financing PIC government expenditures, trust funds alone cannot be relied upon to secure long-term fiscal sustainability. In FSM, use of its CTF to fully finance baseline fiscal gaps over the next 25 years would lead to a decline in the real per capita value of the fund. In RMI and Palau the situation is even more tenuous: baseline fiscal gaps cannot be fully financed by the CTF in either

case, and the Palau CTF does not have the capacity to finance budget deficits through to 2040 under most of the scenarios modelled here.

The outlook is somewhat more positive in Kiribati and much more so in Tuvalu. The projections indicate that Kiribati's RERF could finance baseline fiscal gaps, but this would require a decline in the RERF asset base, while financing human development scenario expenditures would exhaust the fund within the projection period. On the other hand, the maintenance of donor aid-to-GDP ratios combined with the realization of opportunities to boost fishing revenues (see Section 4) could, together with RERF flows, allow Kiribati to sustainably finance the development spending scenario. In Tuvalu, the TTF and CIF have the capacity to fully finance projected budget deficits, even in the development scenario, but the government will also need to improve the quality of its public spending.

A comparison of the two trust fund scenarios for each PIC suggests that in some cases, the contribution and withdrawal rules and procedures are inconsistent with longer-term sustainability. For instance, the structure of the Compact Trust Funds is not capital-protecting (in real terms), even though disbursements are intended to replace Compact grants in perpetuity in FSM and RMI. Annual withdrawals from Kiribati's RERF continued until 2014, even though its real per capita value declined sharply several years earlier, in part because the government has not established formal rules pertaining to RERF contributions and withdrawals. On the other hand, in Tuvalu, the TTF rules—which do not allow transfers directly to the budget, and only allow transfers to the CIF when the TTF exceeds its target real value—have been and continue to be effective in ensuring that the fund maintains its value in real terms.

Where necessary, there is scope to introduce capital-preserving rules and put measures in place to ensure compliance. There could also be benefits in strengthening contribution rules to improve the management of windfall revenues from fishing, tourism, and aid. In a number of cases, the recent upturn in these revenues has not prompted corresponding additional contributions to the trust funds, or reductions in debt. This in turn creates the potential for mismanagement of resource-related revenues (if they are saved) or procyclicality in public spending (if they are spent). Overall, experience in the Pacific suggests that trust funds are most effective when operational rules are simple, transparent, allow only limited discretion, and are supported politically and through robust governance structures.

The baseline projections suggest that in the absence of concerted efforts to increase aid, boost domestic revenues, or curtail spending, most of the PICs would need to contract new debt to close their financing gaps. Given the anticipated asset accumulations in the SWFs, expected investment returns, and the present outlook for donor grants, many PICs will find it very difficult to meet their financing requirements. For countries seeking to expand their public spending in a manner consistent with the human development scenario, the implications for debt accumulation would be significantly greater.

However, for the PICs at a high risk of debt distress, additional borrowing even on concessional terms may be ill-advised. By definition, these countries already have debt at levels which are consistent with a material probability of debt distress and default, and which put the sustainability of trust funds at risk. Unfortunately, many of the countries at a high risk of debt distress are also those where the financing needs are greatest (e.g. RMI, FSM, and Kiribati).

For those PICs at a moderate risk of debt distress, there may be scope for some additional debt, but as a general rule borrowing should only be on concessional terms. Even borrowing on concessional terms may be problematic for countries rated at a moderate risk of debt distress, in part because traditional debt sustainability analyses may not adequately capture risks to the PICs (these risks have been better accounted for in more recent DSAs). In particular, the PICs' vulnerability to natural disasters and other external shocks would tend to imply that they will generally be more vulnerable to debt distress than a country that has a similar macroeconomic outlook but faces a more stable external environment. A cautious approach to public borrowing is also advisable given many investment proposals are likely to have relatively low economic returns, consistent with the generally slow potential growth rates in the PICs.

To take advantage of investment opportunities while maintaining aggregate debt sustainability, it is important that the PICs have robust rules around the contracting of new debt. In PICs such as Vanuatu, the Solomon Islands, and PNG – where the risk of debt distress is more moderate, the outlook for growth is relatively strong, and development needs are greater – modest increases in debt-funded capital spending may be justified. But governments should have systems in place to effectively identify and prioritize public investment projects (consistent with national capacity), confirm that debt-funded investments are likely to yield a positive economic return, and ensure value-for-money in procurement and design.

Development partners could also do more to be flexible in the financing terms they provide, and to maximize the effectiveness of their development assistance. This would assist the PICs in their efforts to maintain fiscal sustainability and encourage them to make full use of available concessional financing before turning to non-concessional sources. For instance, in addition to providing more grant resources to the PICs, those development partners currently providing concessional loans to the PICs could also allow recipients to choose the mixture of loans and grants that they receive for a given financing envelope (set in present value terms). To ensure that the non-financial costs of borrowing are minimized, development partners should ensure that any concessional loans are provided in a way that ensures country ownership and maximizes their effectiveness. This is the subject of Section 5.

4. The promise of *Pacific Possible*

Pacific Possible (PP) examines the economic impacts of transformative opportunities in several areas – including tourism, fisheries, labor mobility, and the knowledge economy – over the next 25 years. This section discusses how exploiting these opportunities could affect long-run fiscal outcomes in each of the PICs. In particular, it examines how increases in income associated with PP interventions would expand PIC revenues, and specifically considers the effect of opportunities in fisheries, which would directly increase the fishing license fees accruing to some PIC governments. The increases in income and revenues projected by PP improve the ability of PIC governments to finance increases in spending, which has implications for their capacity to meet the human development targets introduced in Section 2.

a. Pacific Possible opportunities

The *Pacific Possible* opportunities considered in this section include income- and employment-enhancing opportunities in fisheries, tourism, knowledge economy and labor mobility. These are summarized in Box 3 and described in more detail in the *Pacific Possible* overview paper and the associated background papers.

Box 3: *Pacific Possible* opportunities

Tourism

With a projected additional one million arrivals to the region by 2040, tourism will provide an important opportunity for many PICs to accelerate growth and generate employment. Opportunities highlighted in *Pacific Possible* include expanding the Chinese tourist market, increasing the number of luxury resorts, capturing the retiree market, and basing cruise ships in the region.

Knowledge Economy

In recent years, the PICs have liberalized telecoms markets and invested heavily in fiber optic cable connections, creating the basis for significant increases in mobile and internet penetration. This has the potential to enhance productivity (e.g., in public service delivery, improved monitoring of fisheries, etc.); enhance the quality and attractiveness of existing activities (tourism, education, health); and create new market opportunities (e.g., business process outsourcing).

Fisheries

Fisheries have the potential to generate more than US\$300 million in additional PIC revenues by 2040 and significantly boost national incomes in Kiribati, Tuvalu, and FSM. Making the most of this opportunity will entail broadening participation in the vessel day scheme beyond the Parties to the Nauru Agreement, ensuring compliance with catch limits, increasing the flexibility of access arrangements, gradually moving from a vessel based to a catch based system, and investing in skills and capacity.

Labor Mobility

Labor mobility opportunities will be central to creating employment and income earning opportunities for the PICs. Additional labor mobility opportunities would generate benefits for the labor receiving and labor sending countries as well as for the migrants themselves. Estimates suggest that introducing Australia-New Zealand Atoll Access Agreements, a Pacific Access Category for Australia, Pacific caregiver programs, and entry into new labor markets such as Canada and Korea could generate additional net income of around US\$13 billion for about 240,000 permanent migrants by 2040, with workers from Fiji, Papua New Guinea, Samoa, and Tonga likely to benefit most.

Pacific Possible considers the extent to which exploiting these opportunities would increase GDP, incomes, employment and government revenues. Fisheries interventions would boost national incomes directly through their effect on license fees, as well as through multiplier effects that lead to GDP increases via

subsequent rounds of spending in the domestic economy. Tourism interventions boost GDP through their effect on tourist spending, with the potential for further multiplier effects. Labor mobility interventions boost national incomes directly – through their effect on the number of PIC nationals working overseas, and the remittances that they send home – and also have indirect multiplier effects on GDP, as additional remittances and seasonal worker income are spent in the domestic economy. Knowledge economy interventions could increase GDP via increased activity in the ICT sector and in ICT-related activities such as e-commerce, online offshoring and outsourcing, and financial technologies. They could also act to boost productivity across the entire economy. Figure 62 and Figure 63 illustrate the combined GDP and GDP per capita impacts of *PP* opportunities in these four areas.

Figure 62: PP projections of average annual growth in GDP, 2015-2040

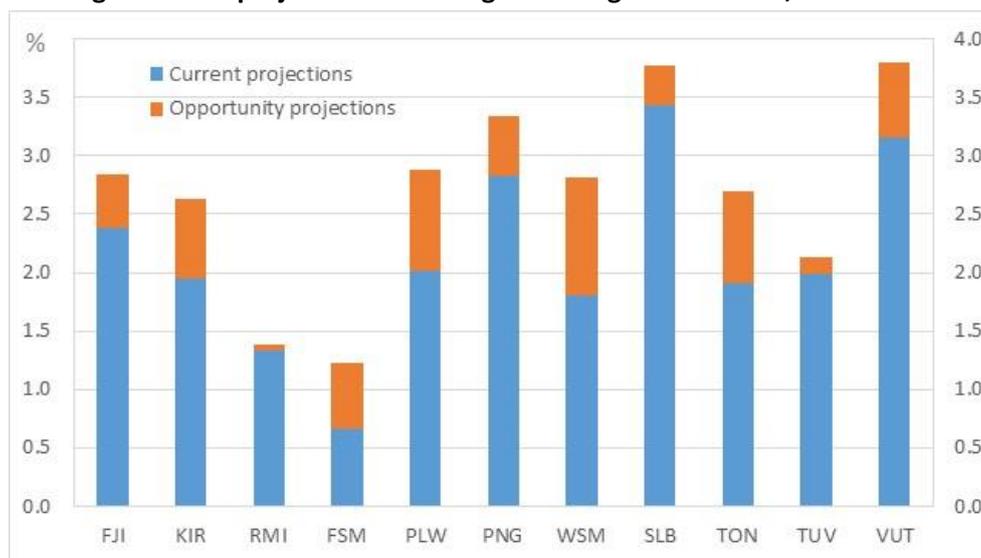
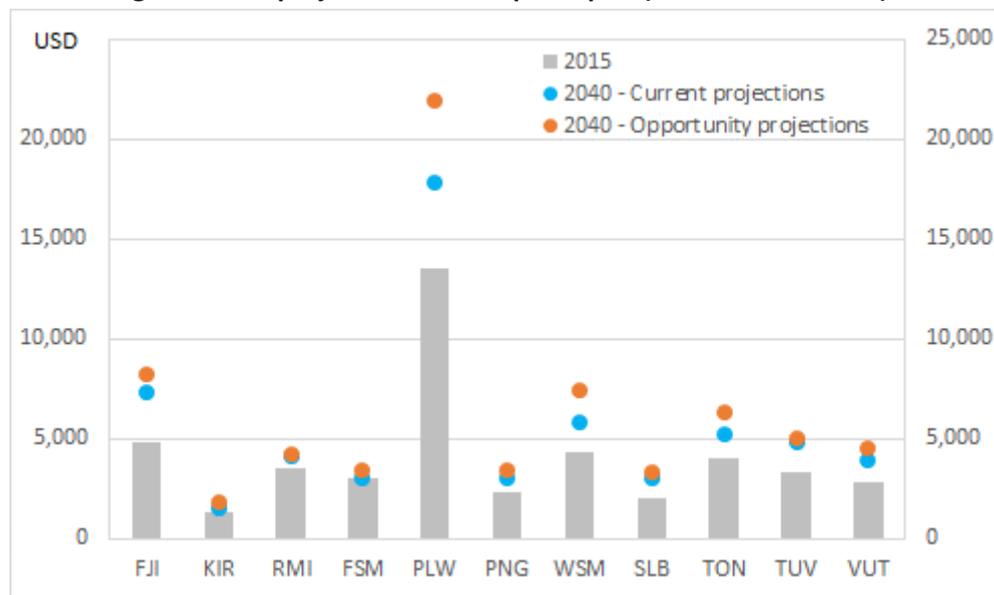


Figure 63: PP projections of GDP per capita (constant 2015 US\$)



Pacific Possible also examines the impact of two risks that could undermine development gains over the next 25 years if not managed well: noncommunicable diseases (NCDs), which are already affecting the lives of many Pacific Islanders; and climate change and natural disasters, to which the PICs are heavily exposed. The economic burden of NCDs in the Pacific is already high compared with other middle-income countries,

and is increasing over time, especially as incomes rise. *PP* modelling suggests that the PICs could lose between 3 and 10 percent of GDP by 2040 if they do not pursue measures to reduce the consumption of unhealthy foods, tobacco, and alcohol (including through taxes and regulation); improve the efficiency and impact of the health budget; and strengthen the evidence base on NCDs. While the current and opportunity projections presented in this section assume that these interventions occur, insufficient action would likely mean reduced incomes and revenues and increased health-related expenditures, and as such can be viewed as a downside risk to both sets of projections.

Economic costs of natural disasters are already high for most PICs—on average between 0.5 and 6.6 percent of GDP is lost annually—and *PP* notes that climate change will increase vulnerabilities. These disasters destroy physical capital, draw on significant government and aid resources that are therefore unavailable for more productive uses, and contribute to macroeconomic volatility, all of which tend to slow long-term economic growth and complicate fiscal management. Many of the major drivers of PIC economies, such as tourism, agriculture, forestry, and fishing, are highly vulnerable to these shocks. Climate change will continue to exacerbate these challenges as severe weather events are forecast to increase in frequency and intensity. There are, however, uncertainties around the future speed and intensity of climate change. The annual costs of coastal adaptation and adaptation of infrastructure to changes in rainfall and temperature alone are estimated to vary from between 1 and 2 percent of 2040 GDP in Samoa to between 12 and 24 percent of GDP in Kiribati and the Marshall Islands (with the ranges depending on scenarios for temperature, rainfall, and sea levels).

However, in general it is extremely difficult to project the economic impacts of natural disasters and climate change over the next 25 years and how they might vary according to the adaptation measures adopted. The literature suggests that natural disasters have negative effects on growth (partly offset by reconstruction spending), and that fiscal balances also tend to be adversely affected.³³ Cabezon et al. (2015) show that tax revenue declines in the year of the disaster, while spending rises on account of immediate relief programs and reconstruction efforts in the longer-term. The resulting fiscal gap can prompt higher borrowing, with Lee et al (2016) finding that natural disasters tend to increase public indebtedness for Pacific islands. However, given the prevailing uncertainty around climate projections over the next 25 years, neither the increasing economic costs of natural disasters nor the costs of adaptation have been explicitly factored into these projections. Nevertheless, to the extent that the projections for growth, revenues, expenditures and aid are at least in part based on historical outcomes, the historical average frequency and magnitude of natural disasters will be implicitly incorporated in most cases.

b. Revenues

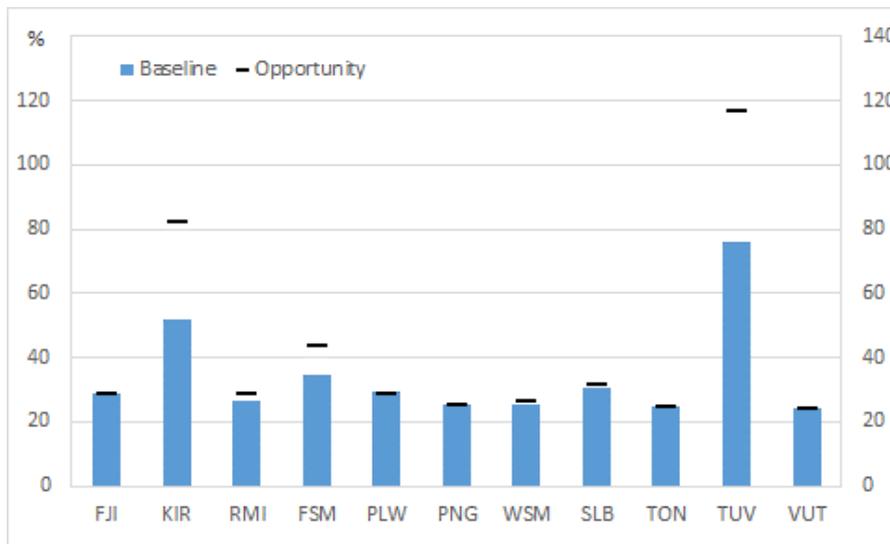
Pacific Possible opportunities boost government revenues in two ways. First, *PP* fisheries interventions are projected to directly increase the fishing license fees accruing to PIC governments. Second, interventions in each of the four areas outlined above – tourism, labor mobility, fisheries, and the knowledge economy – are projected to boost GDP and hence the tax base in each of the PICs, which leads to higher revenues (assuming that the tax share of GDP remains unchanged).

Figure 64 shows the effect of increases in fishing license fees on PIC revenues. As fishing license fees affect government revenues but not GDP, they boost the revenue-to-GDP ratio in all countries, but have particularly

³³ See *Small States' Resilience to Natural Disasters and Climate Change: Role for the IMF*, October 2016.

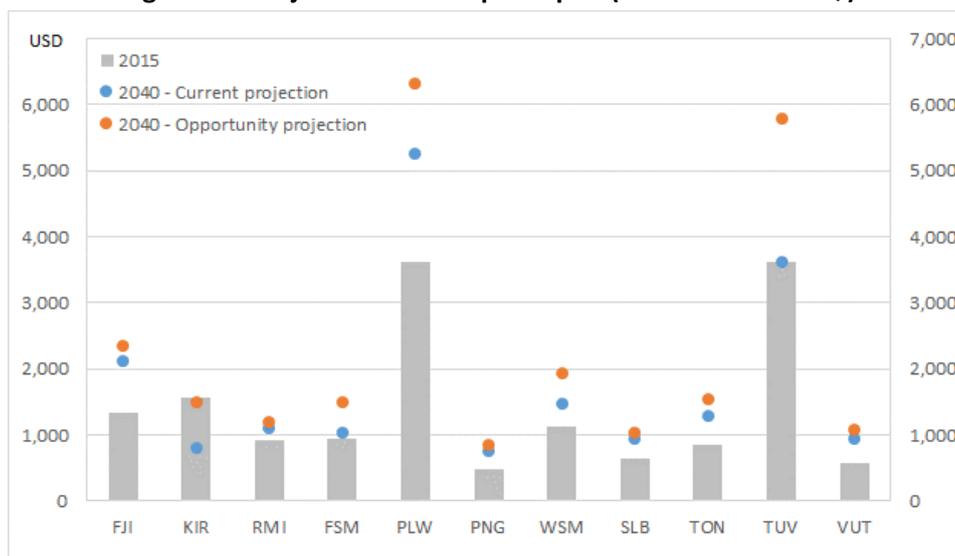
marked effects on revenues in Kiribati, Tuvalu, and FSM. Interventions in the other areas are not projected to increase the revenue share of GDP.

Figure 64: Projected revenue as a share of GDP in 2040



However, by boosting PIC growth rates over the next 25 years, the other interventions will increase the tax base available to PIC governments. Figure 65 shows how 2040 PIC revenues (in per capita US dollar terms) are projected to increase as a result of *PP* opportunities. The difference between the opportunity and the current projections for 2040 stems from both the increase in fishing license fees described above, and the increase in GDP associated with *PP* interventions, under the assumption that the baseline revenue-to-GDP projections otherwise remain unchanged. In percentage terms, the largest revenue increases are in countries standing to gain the most from fisheries interventions, namely Kiribati, FSM and Tuvalu. Nevertheless, the potential revenue increases (relative to current baseline projections) are also substantial in other countries – including Fiji, Samoa, Tonga, and Palau – highlighting the role that *PP* interventions can potentially play as drivers of government revenues as well as economic growth.

Figure 65: Projected revenue per capita (constant 2015 US\$)

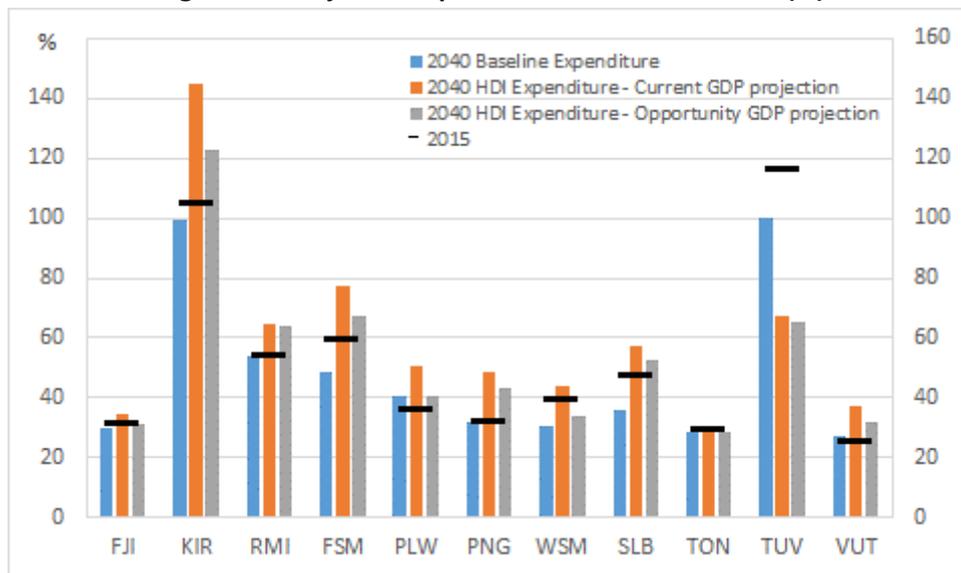


c. Expenditures

By raising government revenues, the *PP* interventions can potentially help PIC governments finance increases in public spending. We assume that the baseline projections of expenditure-to-GDP remain unchanged after the *PP* interventions, meaning that the dollar value of government expenditure increases with the additional growth in GDP. By boosting the revenue base, economic growth can therefore open up fiscal space for further public expenditure.

In particular, the *PP* interventions make it easier to meet aspirational human development targets (as introduced in Section 2). Figure 66 shows that when *PP* opportunities are exploited, the levels of public spending needed to meet the human development targets are substantially lower as a proportion of GDP in some countries. Notable declines are evident in Kiribati, Vanuatu, and FSM, as well as in Palau and Samoa, consistent with the more pronounced GDP effect of *PP* interventions in these countries.³⁴ The direct revenue impacts of fisheries interventions will also provide more fiscal space to finance these expenditure needs in some cases.

Figure 66: Projected expenditure as a share of GDP (%)



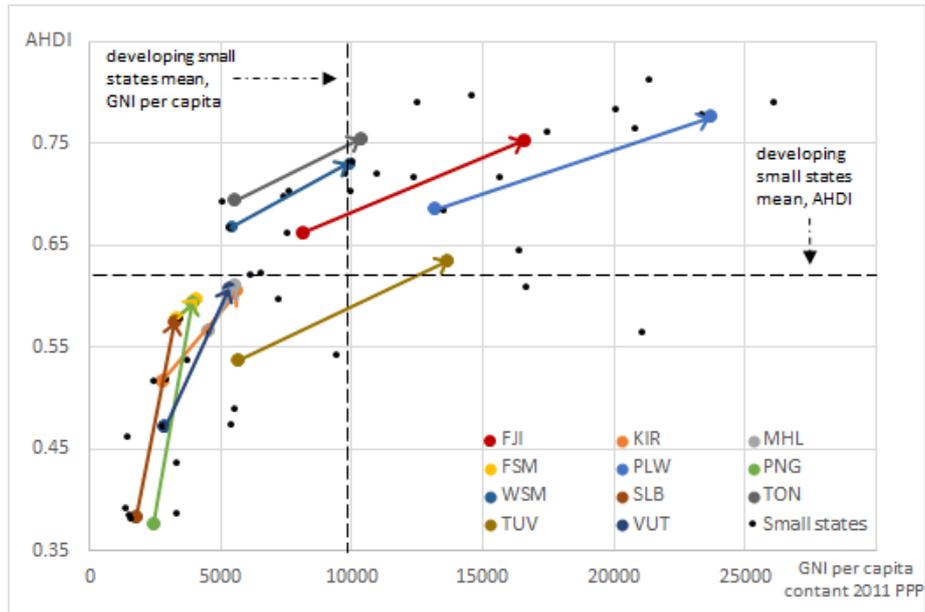
d. Human development

As well as increasing the PICs' ability to finance development expenditures, the *Pacific Possible* interventions will also spur human development through their effect on incomes. Assuming public spending consistent with the human development scenario and income growth consistent with *PP* interventions would lead to the AHDI trajectories (i.e. including income per capita as well as health, education, and infrastructure components) depicted in Figure 67.³⁵

³⁴ Note that in Tonga, which is the highest performing country in terms of the human development indicator used here, public expenditure as a proportion of GDP in the human development scenario is set equal to baseline expenditure by assumption.

³⁵ For most PICs, the non-income component of the AHDI in 2040 is assumed to remain the same under current income projections and under *PP* opportunity incomes (public spending is assumed to be sufficient to meet the human

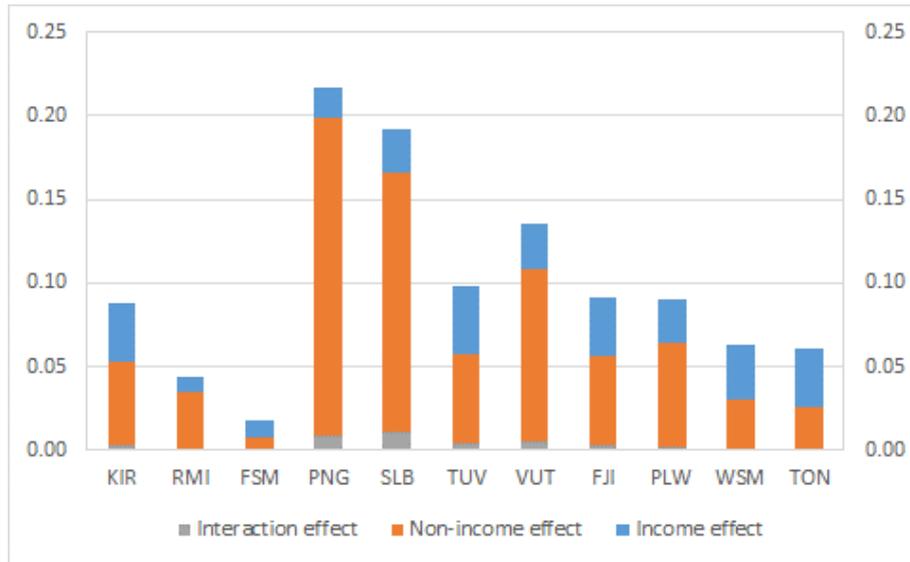
Figure 67: AHDH and income per capita trajectories from 2015 to 2040 assuming PP interventions



Nevertheless, public spending is the predominant driver of higher AHDH outcomes in most PICs. Figure 68 decomposes the AHDH changes from Figure 67 into their underlying income and non-income components. For almost all PICs, improvements in health, education, and infrastructure outcomes (which are assumed to be directly influenced by the level of public spending) contribute the most to the overall human development increase.³⁶

development target in both cases). Hence the AHDH projections in Figure 63 differ from those in Figure 25 only because of the higher income per capita associated with PP interventions. But in Tonga, the human development scenario public expenditures are set equal to the baseline expenditure-to-GDP projections. As Tonga retains its (baseline) expenditure-to-GDP projections in the PP opportunity income case, it also gets a boost to the non-income component of its AHDH, as the higher GDP flows through to higher spending per capita.

³⁶ Like with the HDI, income per capita is given a one-third weight in the AHDH, and non-income components a two-thirds weight.

Figure 68: Decomposing AHDI changes into income and non-income effects

e. Fiscal balances

Under the baseline outlook for revenues, expenditures, and grants, *Pacific Possible* interventions have little impact on the projected fiscal balances for most PICs in 2040 (Figure 69). This is due to the assumption that for most countries, both revenue-to-GDP and expenditure-to-GDP ratios remain little changed or unchanged, despite increases in GDP attributable to the *PP* interventions. The clear exceptions are Kiribati and Tuvalu which could anticipate a transformation in long-run fiscal outcomes to the extent that they take advantage of *PP* opportunities in fishing. Other smaller improvements can be seen in FSM, RMI, and the Solomon Islands, again due to *PP* fishing opportunities. In all cases, however, the real dollar value of government expenditure increases with the additional growth in GDP, in line with the assumption that the baseline projections of expenditure-to-GDP remain unchanged after the *PP* interventions.

The fiscal balance projections show the extent to which the *PP* interventions can potentially improve the feasibility of meeting human development targets. Figure 66 shows fiscal balances in 2040 under the human development expenditures scenario, again under both current GDP and revenue projections and *PP* projections. While the human development expenditures scenario would give rise to unmanageable fiscal deficits in 2040 for most of the PICs under current growth projections, *PP* interventions would have a pronounced positive impact in some cases, including in FSM, Vanuatu, Kiribati, and Tuvalu, as well as Palau and Samoa. Nevertheless, the budget deficits associated with meeting these development targets would likely remain unsustainably large in the North Pacific countries and in Papua New Guinea, Solomon Islands, and Vanuatu, even assuming *PP* growth dividends. This suggests that additional measures to increase domestic revenues and/or aid may be required to finance development-enhancing public spending in these countries over the next 25 years.

Figure 69: Projected fiscal balances as a share of GDP (2021-40 average) assuming baseline expenditures

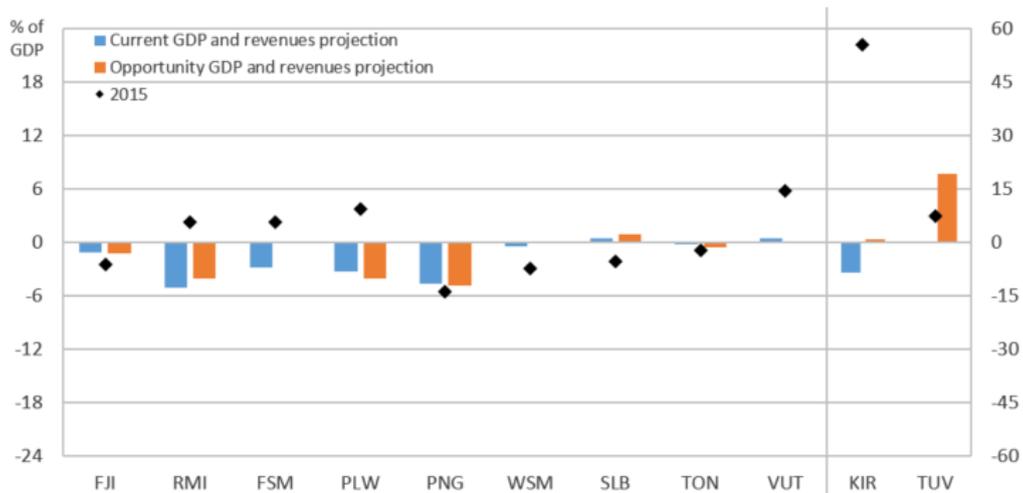
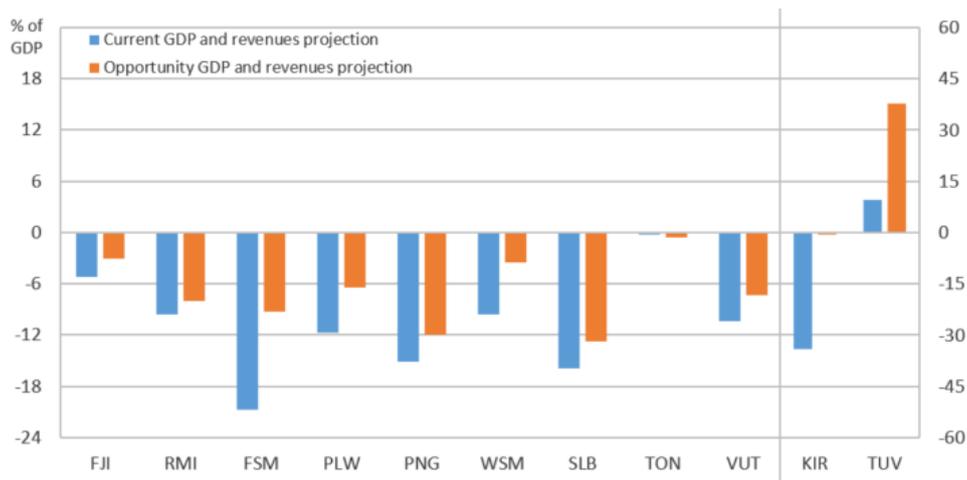


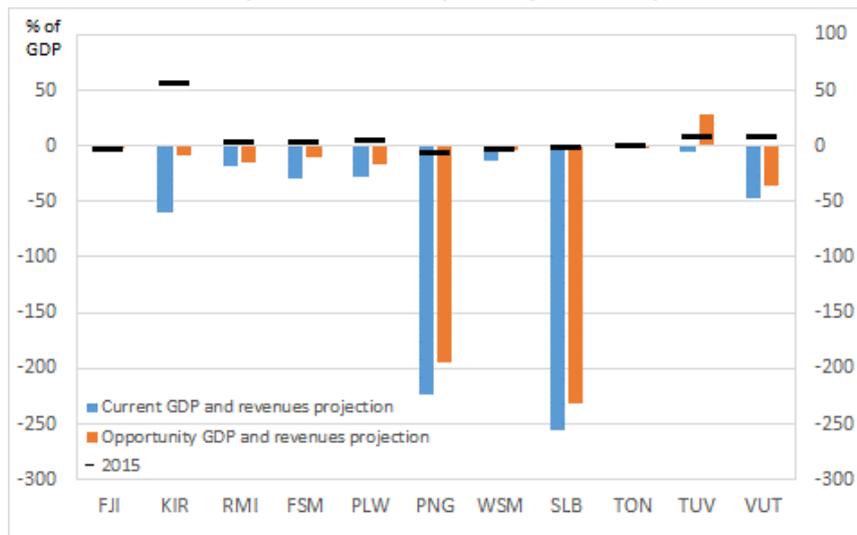
Figure 70: Projected fiscal balances as a share of GDP (2021-40 average) assuming human development scenario expenditures



*Note that the human development target is set at the developing small states average for all PICs except for Fiji, Samoa, Tonga, and Palau, where the target is higher

The modelling also suggests that meeting the (small states average) human development target would be extremely difficult for Papua New Guinea, Solomon Islands and Vanuatu if public spending inefficiencies remain unaddressed. The fiscal balances presented in Figure 66 assume that between 2015 and 2040 countries in which spending is less efficient than the small states average (controlling for geography) are able to boost the efficiency of their public spending. Figure 71 shows how important this assumption is to the fiscal projections. It depicts 2040 fiscal balances consistent with reaching the human development target, under the assumption that the effectiveness of public spending remains at current levels. Changing this assumption only has modest effects in most cases, consistent with the analysis in Section 2 suggesting that public spending effectiveness in most PICs is already close to or better than the small states average after controlling for geography. However, in the countries where measured effectiveness is lowest – Papua New Guinea, the Solomon Islands, and Vanuatu – failure to improve the quality of spending would mean that the human development target would be very difficult to attain.

Figure 71: 2040 fiscal balances assuming human development scenario expenditures, and assuming no improvements in spending efficiency



f. Summing up and recommendations

Pacific Possible opportunities affect the fiscal outlook for each of the PICs by boosting government revenues.

This boost comes from direct increases in the fishing license fees accruing to PIC governments, and from increases to the tax base flowing from the impact of *PP* interventions on GDP. The countries with the greatest potential for revenue increases are those standing to gain the most from fisheries interventions, namely Kiribati, FSM and Tuvalu. Nevertheless, *PP* interventions could also boost real revenues substantially in several other countries, including Fiji, Samoa, Tonga, and Palau, due mainly to the potential impact of these interventions on economic growth and the tax base.

By boosting PIC revenues, the *PP* interventions can potentially help PIC governments to finance increases in public expenditure. We have already seen that after controlling for geographic constraints associated with remoteness and dispersion, the effectiveness of public spending in a number of PICs – as measured by the development outcomes associated with a given level of public spending per capita – appears to be in line with or better than small states comparators. At the same time, human development indicators remain relatively low in some of these PICs due to low levels of public spending and/or geographic constraints, implying that public expenditure must be raised if human development targets are to be achieved. The *PP* interventions make it easier to fund such increases in public expenditure.

While the *PP* interventions will have a direct effect on national incomes, higher public spending – targeted at critical areas – also has the potential to be an important driver of improved human development outcomes in the PICs. This underlines the importance of creating the fiscal space necessary to finance spending on key social services. However, the projections suggest that achieving overall public spending levels consistent with the human development targets is likely to remain difficult in the North Pacific countries and in Papua New Guinea, Solomon Islands, and Vanuatu, even assuming *PP* growth dividends. As a result, additional measures to increase domestic revenues and/or aid may be required to finance development-enhancing public spending in these countries over the next 25 years. In addition to increasing the quantity of spending, measures to improve the quality of public spending will be of critical importance in all PICs, and particularly in those PICs where spending effectiveness appears to be relatively weak, including Papua New Guinea, Solomon Islands, and Vanuatu.

5. Improving aid effectiveness

The previous sections indicate a continued need for aid across the Pacific, which is most appropriately viewed as means of funding structural financing gaps on an ongoing basis, rather than as a short or medium-term ‘intervention’. Aid is necessary as a supplemental source of financing for public expenditure: a counterfactual of no aid would likely require severe cuts to public services with adverse consequences for development outcomes. And the fact that several PICs appear to achieve comparatively strong development outcomes given their geography and level of public spending per capita – a relatively large proportion of which is financed by aid – suggests that aid-financed spending is likely to be broadly effective in these countries.

This approach to aid effectiveness differs from the tradition of attempting to estimate the relationship between aid and economic growth. Despite considerable aid flows to the PICs in recent decades, economic growth has remained very modest. This has been variously attributed to a failure of aid to alleviate binding constraints and boost the productive capacity of PIC economies, or more perverse effects which can in fact imply negative impacts of aid on growth. For instance, Hughes (2003) has argued that ‘aid has failed the Pacific’ by distorting incentive structures away from productive activities and toward rent seeking activities, thereby reducing the prospect of rapid economic growth (Hughes, cited in Dornan and Pryke, 2017). A related critique is that ready access to aid ‘crowds out’ commercial finance, leading to less discipline in the use of funds and inhibiting the development of domestic financial markets. Others have highlighted the failure of some interventions to align with government priorities or account for political realities, calling their impact and sustainability into question. There is likely some truth to each of these critiques. Nevertheless, Dornan and Pryke (2017) note that the few Pacific-focused econometric studies on this topic have in fact suggested positive growth and poverty reduction effects from aid in the region.³⁷

Given the specific structural constraints faced by many of the PICs, the positive effects of aid are more likely to be apparent in overall macroeconomic stability and the continued funding of public services than in economic growth per se. The relevant counterfactual in the absence of aid is a less sustainable budget position and/or weaker levels of public service delivery. Although macroeconomic stability and improved health, education, and access to infrastructure would themselves be expected to raise economic growth over time, these effects are likely to be relatively weak and/or difficult to identify in the PICs, given their geography and other structural constraints. Moreover, a relatively high proportion of aid to the PICs is dedicated to disaster relief and recovery, which improves welfare but is not necessarily associated with faster growth. Nevertheless, at the macroeconomic level aid plays a valuable role in filling PIC financing gaps, irrespective of its effect on growth rates.

At the same time, it is important to ensure that any aid that is provided is as effective as possible, and the above discussion at the very least suggests that reliance on aid carries risks which it is important to minimize. The 2005 Paris Declaration on Aid Effectiveness highlighted a set of principles to address some of the key risks

³⁷ See Dornan and Pryke (2017), *Foreign Aid to the Pacific: Trends and Developments in the Twenty-First Century*, Asia & the Pacific Policy Studies, vol. 4 issue 3, pp. 386-404, September.

around lack of government ownership, poor targeting, and fragmentation.³⁸ The principles, which were also part of the “Cairns Compact” on Aid Effectiveness agreed at the 2009 Pacific Islands Forum, include:

- Ownership of development strategies by aid recipients;
- Alignment of development assistance to recipient priorities;
- Harmonization of development assistance to avoid duplication and simplify its provision;
- A focus on results; and
- Mutual accountability by both development partners and recipients

This section provides an overview of current aid practices in the Pacific and an assessment of opportunities for improvement. It begins by considering the different types of aid currently provided in the PICs, and the extent to which they align with the principles outlined above. It then turns to an assessment of the volatility and predictability of aid flows and their macroeconomic effects.

a. Aid modalities

At the global level, program-based approaches (PBAs) have become more popular in recent years, in line with the aid effectiveness principles of country ownership and alignment with national priorities. PBAs include general budget support, which is not targeted or earmarked at a particular sector, as well as sector-wide approaches (SWAs) which can include sector-based budget support.³⁹ A central aim of PBAs is to promote the domestic ownership of aid (Handley, 2009), by ensuring governments endorse and lead the overall program of activities, using local systems for program design, implementation, and monitoring and evaluation, and thereby strengthening local capacity. The emphasis on government ownership is also reflected by the increased focus on national development and sector plans in country partnership agreements between donors and recipients (Dornan and Pryke, 2017).

Budget support has proven to be a relatively attractive modality in those countries which have an adequate macroeconomic framework, a sound public financial management system, and where the government has the capacity and enthusiasm to formulate and implement a program of supporting reforms. Compared with

³⁸ [Rodgers \(2013\)](#) notes that the international community has signed up to three agreements to enhance aid effectiveness – the Paris Principles (2005), the Accra Agenda for Action (2008) and the Busan Partnership for Effective Development Cooperation (2011) – while there are also a number of regional mechanisms in the Pacific. These include the Pacific Plan for strengthening regional cooperation and integration (2006); the Pacific Aid Effectiveness Principles (2007) and the Cairns Compact on strengthening development coordination in the Pacific (2009). Nevertheless, experience suggests that the coordination of aid could be improved in the Pacific, including through the further use of regional arrangements (see below).

³⁹ Although SWAs differ from country to country and from sector to sector, they are often associated with sector budget support. They can be characterized as:

an evolving partnership between governments, other national actors and development partners coalescing their joint support of nationally-defined programs, to be managed and implemented through increased reliance on country systems and capacities, and with a strong results focus. SWAs are intended to bring about improvements both in development outcomes and processes, such as better harmonization and alignment of assistance, and strengthened institutional capacity. They are also intended to reduce transaction costs for governments by removing their need to deal with the individual mechanisms and processes of multiple development partners.

Source: DFAT Office of Development Effectiveness (2015), [Sector wide approaches in the health sector: A desk-based review of donors’ experience in Asia and the Pacific](#).

project financing, budget support is a higher-trust mechanism in which donors generally have less (and in some cases very little) control over how the financing is used. As a result, the sustainability of the overall macroeconomic situation and the credibility of government systems for budgeting and spending are essential prerequisites. With these conditions in place, however, the provision of budget support has the potential to increase government ownership, promote the development and use of government systems, and provide the basis for the coordinated provision of financing and technical assistance from development partners.

Budget support comes in a number of different forms in the Pacific (see Dornan and Pryke, 2017 for a review). Sector budget support is most prevalent, accounting for around 80 percent of the total budget support disbursed. This is in part due to the Compact grants received by RMI and FSM, which in dollar terms are by far the largest country budget support programs in the Pacific, and are directed toward six sectors: education, health, public sector infrastructure development, public sector capacity building, environment, and private sector development. While the conditions on this budget support have traditionally been relatively light, since 2004 recipient governments have been required to submit spending plans to account for their use of Compact funds, which has led to delays in transfers in some cases. Elsewhere in the Pacific, sector budget support is also the more common modality used by Australia and New Zealand (which tend to focus on the health and education sectors) and the EU (often focused on climate resilience and water and sanitation).

General budget support, which is not earmarked or targeted at a particular sector, is the main modality used by the World Bank and ADB, with several bilateral development partners also contributing to coordinated programs. Coordination between development partners in the provision of general budget support – which is disbursed against completion of agreed-upon policy actions – ranges from agreement on sub-sets of policy actions to full partnership in support of a joint policy matrix. In general, this has reduced transactions costs to the government (and between donors, e.g. to the extent that documentation is replicated), and provided a basis for coordination of technical assistance and policy dialogue more generally.

Most evaluations of budget support in the PICs are broadly favorable, in part due to successful coordination between development partners. A recent review of World Bank general budget support in the Pacific (Horscroft, 2016) suggests that development policy operations have been an important anchor for dialogues on economic policy and public financial management with the PICs. With some exceptions, they have provided fast-disbursing and relatively predictable resources, using country systems. And over the last six years the provision of general budget support has supported some significant policy reforms in the PICs.⁴⁰ Dornan and Pryke (2017) also find that budget support has facilitated higher levels of government spending than would otherwise be sustainable, and supported positive changes in public administration and public financial management, in part through the provision of linked technical assistance.

However, there is scope for further improvement. Drawing on the experience in Solomon Islands, Tonga, and Tuvalu, Dornan and Pryke (2017) also note that budget support operations have had “limited impact in

⁴⁰ Horscroft (2016) finds that:

DPOs have supported stronger revenue mobilization in Samoa and Tonga, better oversight of fisheries revenue in Kiribati and Tuvalu, and a transparent mining tax regime in the Solomon Islands. They have also helped strengthen procurement and debt management in several PICs, and helped improve the management of the RERF in Kiribati. In the area of structural reforms, DPOs have helped advance state-owned enterprise (SOE) reform in Kiribati (in telecommunications) and Tonga (with a hotel privatization spurring the redevelopment of high-end accommodation). On human development and social protection, DPOs have supported fee-free primary schooling in Samoa, significant increases in NCD-tackling excises in Tonga, and the expansion of vocational training opportunities – including for women – in Tuvalu.

promoting more significant (and politically contentious) reform”. There is also a sense in which the measurable results of general budget support operations have been unconvincing, in part because of the nature and ‘intangibility’ of the reforms being supported (Horscroft, 2016). In some cases, budget support operations could do more to incentivize the *implementation* of supported policy reforms, including by linking disbursements to results (e.g. reduction in costs or increase in timeliness of procurement) as well as policy actions (e.g. introduction of new procurement procedures).

Sector budget support has advantages and disadvantages relative to general budget support. Sectoral reforms can be easier to incentivize through sector budget support because the funding is more closely linked to the reform (i.e. with sector budget support, education sector reform will ultimately result in increased funding to the education sector, but with general budget support this need not be the case). In the Solomon Islands, the provision of sector budget support, combined with the associated conditions on spending of the domestically-sourced budget, has meant that recurrent budget allocations to education and health have increased at a significantly faster rate than budget allocations to other sectors (Dornan and Pryke, 2017). On the other hand, sector budget support can be too narrow in its focus, engaging with the relevant line ministry or agency but neglecting other potentially important actors, including in some cases ministries of finance. This may be appropriate in some engagements with a more technical focus (e.g. improving water provision and quality) but more of a risk in others (e.g. supporting PFM reform in education or health). As a result, there is a risk that certain sector budget support programs may fail to muster the whole-of-government engagement needed to catalyze meaningful reforms or ensure sustainable implementation.

Given pronounced infrastructure deficits and thin domestic capacity, project aid has and will continue to play a major role in the PICs. Estimates over the period from 2010 to 2013 suggest that projects accounted for around 60 percent of total aid to the Pacific (Figure 72). Among other things, these projects have provided key national infrastructure – transport, energy, water and sanitation, connectivity – that otherwise would have been inaccessible to most PICs given domestic financing and capacity constraints. While a detailed evaluation of project-based aid in the Pacific is beyond the scope of this paper, one key lesson is that it is essential to account for capacity constraints when programming project aid. A recent review of World Bank projects in the Pacific notes that key challenges stemmed from underestimating the complexity and time required for design, appraisal, negotiation, and implementation. Given thin and stretched capacity in PIC government ministries and agencies, continued efforts are needed to reduce transaction costs (while maintaining necessary safeguards), and projects should aim to build the institutional capacity of client governments where possible, including through the use of national procedures.

Figure 72

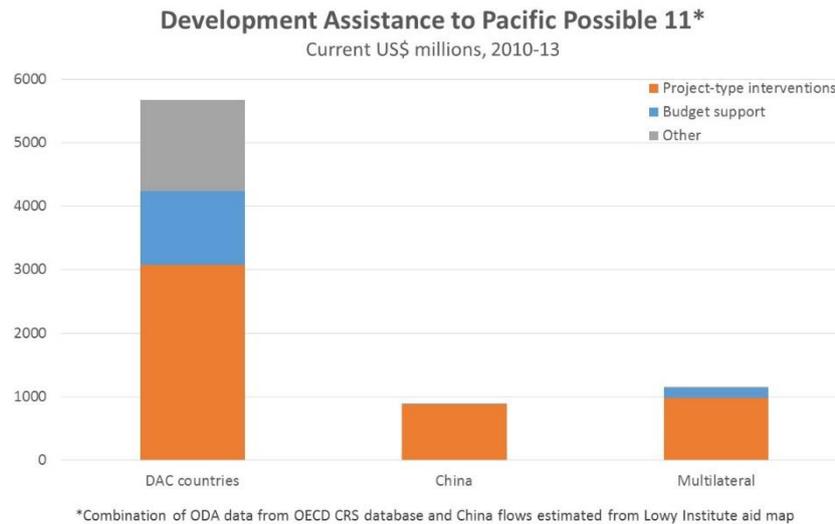
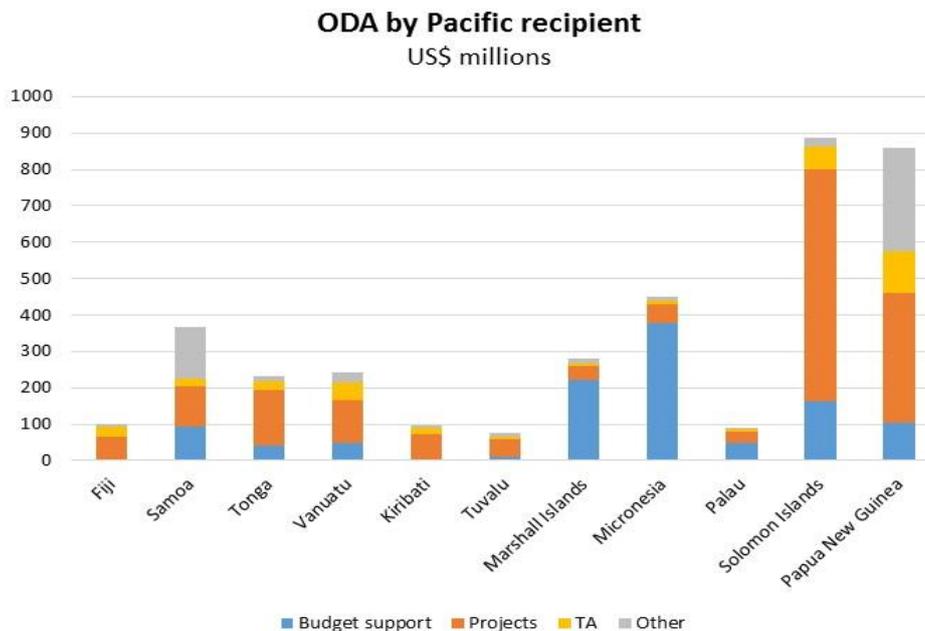


Figure 73



Technical assistance generally comprises a relatively high proportion of ODA to the Pacific, compared with other developing regions. This is unsurprising given the small size and thin capacity of many PICs bureaucracies. However, technical assistance has often been criticized due to its failure to generate sustainable impacts, while the repatriation of salaries paid to consultants and TA providers limits the potential gains to the domestic economy (Dornan and Pryke, 2017). These issues may be exaggerated in many PICs due to high staff rotation, emigration of skilled staff, and constraints to the number of specialized tasks that can be performed by a small number of public servants (Haque et al, 2014).

In many cases alternative approaches to capacity-building may be more sustainable in the Pacific. These could include capacity supplementation (e.g. through contracting out specialized functions), drawing on regional facilities and/or private sector providers for support (Haque et al 2014). TA is also likely to be more

effective to the extent that it is problem-based, aligned with government demand and priorities, and closely-integrated with PBAs such as budget support, in line with the broader aid-effectiveness principles. This may mean in some cases targeting ‘good enough’ rather than ‘best practice’ solutions (Haque et al 2014).

b. Dealing with natural disasters

The PICs have traditionally been heavily reliant on donors in the aftermath of natural disasters. Donors have been the major source of financing for longer-term reconstruction needs, but have also been tapped to replenish foreign exchange reserves and provide more rapid assistance (including through budget support operations that incorporate a much lighter and recovery-focused program of policy actions).⁴¹ While donor support has the advantage of being much cheaper financially than alternative modes of disaster financing, it is also subject to disadvantages. In particular, the process of accessing finance from development partners can be lengthy, difficult and uncertain, there is a risk that the resulting allocation of resources across projects may be inefficient (to the extent that assistance is not well coordinated), and the overall envelope of available finance is often insufficient to return the physical capital stock to its pre-disaster level. PICs also draw on concessional and semi-concessional loans from development partners to finance some of their larger post-disaster construction expenditures, although in some cases this has raised their risk of debt distress and increased debt servicing costs.

In the Pacific, aid should be treated as an important component of an overall strategy for financing the recovery and reconstruction requirements associated with natural disasters. Such a strategy should reflect both time and cost dimensions, ensuring that the volume of funding available at different stages of the response matches actual needs in a cost-effective manner. Aid may impose few direct financial costs but its availability can be uncertain and it often takes some time to arrive after a disaster, with these delays potentially costly in terms of social and economic welfare. Other financing instruments can be activated more rapidly (self-insurance, parametric insurance, contingent credit) but are generally costlier. Because the specific costs and benefits associated with each of these mechanisms will vary across countries, the appropriate mix of these instruments needs to be considered on a case-by-case basis.

For the smallest, most frequent shocks, self-insurance through domestic reserves is likely to be the most efficient method of meeting the associated financing needs. The opportunity costs associated with holding a small amount of reserves are relatively low (i.e. the difference between the cost of borrowing and the investment return on unused reserves), and there are clear benefits in being able to draw on these reserves immediately to finance small frequent shocks. However, as the size of the shock covered by reserves increases and the full amount is drawn less frequently, the total opportunity cost of holding reserves becomes higher and other alternatives become more attractive.

Formal contingent credit mechanisms and parametric insurance schemes can be used to address larger, less frequent hazards. The Pacific Catastrophe Risk Insurance scheme provides quick disbursing financing in the wake of natural disasters. Unlike traditional indemnity insurance, where the payout is determined depending on actual incurred costs, PCRAFI is *parametric* insurance, paying out according to a model representation of the event based on hazard parameters and the geographic distribution of affected assets. This means that it

⁴¹ Under compact agreements with the United States, Marshall Islands, Micronesia, and Palau also have access to emergency support from relevant U.S. agencies, notably the Federal Emergency Management Agency (FEMA) and the United States Agency for International Development (USAID).

results in a much faster payout after a disaster. The PCRAFI insurance program has made two payouts since 2013 – to Tonga following Tropical Cyclone Ian in January 2014, and to Vanuatu following Tropical Cyclone Pam in March 2015 – each of which were made within 10 days after the disaster hit. The Marshall Islands, Samoa, Tonga, and Vanuatu previously made a nominal contribution toward the payment of the insurance premium, with the Government of Japan covering the remaining cost. Currently, these countries use part of their International Development Association (IDA) allocation to finance the premium costs, along with an increased contribution from their own budget. The Cook Islands pay their own premium in full.

While insurance can be used to finance a portion of recovery needs, it is costly – given the frequency and severity of natural disasters in the Pacific – and should not be viewed as a panacea. In the two cases where a catastrophe risk insurance payout has already been made under PCRAFI, only a small proportion of the estimated emergency losses were covered. In Tonga, the payout of US\$1.3 million covered less than 10 percent of the estimated US\$11.3 million in emergency losses from Cyclone Ian, with the modelled ground-up losses totaling US\$49.3 million. In Vanuatu, the modelled ground-up losses were US\$183.5 million and emergency losses were estimated at US\$42.2 million, while the payout was US\$1.9 million. In both cases, payouts were limited due to the relatively low premium paid and the wide range of risks covered, in line with the intention of the facility to cover only immediate post-disaster liquidity needs and supplement domestic contingency budgets. Nevertheless, the experience of PCRAFI suggests that premium affordability is likely to constrain the government’s use of insurance for larger-scale reconstruction and recovery needs. Average annual losses from natural disasters of 2 to 3 percent of GDP in the Pacific provide a very rough estimate of the actuarially fair premium required to insure against these losses. Given fiscal constraints, this cost is unlikely to be feasible for most PIC governments – i.e. in all baseline scenarios and even in most ‘best case’ scenarios – to be able to manage on an ongoing basis.

Contingent credit facilities offered by development partners can also be used to provide reliable and quick-disbursing financing in the aftermath of a natural disaster. The World Bank’s Development Policy Operation with Catastrophe Draw-Down Option (Cat DDO) is one such instrument which has been available to IDA countries from July 2017. The Cat DDO is a pre-arranged line of credit facility offering concessional financing, with disbursements triggered by the declaration of a state of emergency after a natural disaster. The ADB already has a similar facility which has been used in the Cook Islands. The main advantage of such instruments is fast, certain disbursement – potentially immediately after the declaration of a natural disaster. On this front, they compare favorably to most existing modes of development partner assistance, where the transactions costs involved in approving and disbursing financing after a natural disaster are significantly higher. CAT DDOs also have the advantage of promoting ex-ante dialogue and reforms to improve resilience and disaster risk management.

Nevertheless, in the same way as the overall aid envelope is constrained, there will also inevitably be limits on the availability of contingent concessional finance. The cap on the total amount of finance available under such facilities may not be sufficient to fully finance damages and losses after a disaster. The provision of such facilities also may create opportunity costs to the extent that they ‘crowd out’ existing direct financing arrangements from development partners (Clarke et al 2016). At the same time, Clarke et al (2016) also show that under certain conditions, the concurrent use of both contingent credit and parametric insurance can outperform the use of either in isolation. In principle, targeting line of credit facilities at more frequent disasters could potentially allow market-based risk transfer instruments such as PCRAFI to cover less frequent but more severe events, putting downward pressure on the cost of the premiums paid. At the same time,

there are also substantial administrative and operational costs associated with accessing additional DRFI facilities, particularly in the thin-capacity environments of the Pacific. Hence there is an overarching need to clearly set out the ‘additionality’ of any new instrument and simplify the suite of DRFI instruments where possible.

For the largest disasters, traditional ex post development partner financing is likely to remain the major source of finance for longer-term reconstruction efforts. Contingent credit schemes will likely remain limited in scale and unsubsidized insurance (whether parametric or indemnity) to cover needs beyond the immediate aftermath of a disaster is likely to remain too costly for most PICs. But, as noted, there are also issues associated with donor financing after natural disasters. At its worst, it can be slow and unpredictable in its response, fragmented in its delivery, and misaligned with country priorities. Moreover, for the larger disasters, estimates suggest that even external financing from development partners covered less than half of the estimated costs in the three post-disaster years.

In addition to scaling up the total amount of assistance provided in the wake of a disaster, one possibility would be to increase the use of market-based insurance for PIC infrastructure, with donors subsidizing the cost of the premiums. Even if the unsubsidized cost of such insurance would be too high for recipient countries to bear, for those PICs with stronger capacity it may make sense for development partners to provide a fixed annual subsidy to finance the premiums of such an insurance scheme. This would ensure that PIC governments have more control over post-disaster spending, and place less of the onus on donors to meet reconstruction needs in a more ad hoc fashion ex post. A fixed subsidy could also help incentivize the PICs to more proactively manage their natural disaster and climate change related risks ex ante, given they would directly benefit from any resulting premium reductions.

For PICs with weaker capacity, close involvement from development partners in financing and implementing reconstruction efforts after a natural disaster is likely to be most appropriate. In these cases, the standard aid effectiveness recommendations apply: efforts should be made to coordinate across donors to reduce the fragmentation of projects, and close alignment with government plans and priorities is critical.

c. Fragmentation and coordination

In general, measures of aid fragmentation are generally lower in the PICs than in other regions, mainly because of the concentration of development assistance among relatively few donors (Dornan and Pryke, 2017). Other things equal, less fragmentation should in turn should make coordination among development partners easier than it is in other countries. Nevertheless, fragmentation of projects and financing remains an issue in some PICs, particularly in areas such as climate resilience. Fragmented aid implies higher transactions costs for governments, who are required to deal with more reporting requirements, more variation in donor rules and procedures, and more donor missions. The presence of more donors in a given country also may undermine bureaucratic capacity, as more donors means that skilled public officials are more likely to be lured into donor-funded positions (Knack and Rahman, 2007). In the absence of good coordination, more donors can also mean narrower donor stakes in overall country outcomes, fewer opportunities to take advantage of scale economies, and a lower likelihood that projects are mutually consistent (IMF and World Bank, 2006).

Overall, the experience in the Pacific suggests that the provision of budget support in the right circumstances can facilitate coordination among development partners and reduce the negative impacts of fragmentation, while enhancing government ownership of policy reforms and promoting the alignment of

aid with national priorities. In keeping with these objectives, development partners in the Pacific have established a set of ‘good practice principles’ to guide the provision of general budget support to the PICs. Among other things, these principles highlight the importance of continuing to pursue close coordination between development partners: in dialogue with the government, in the use of a single matrix of policy actions, and in the provision of supporting technical assistance. The principles also emphasize the importance of government ownership: budget support should not be seen as a means to force reforms that are not government priorities, and experience suggests that attempts to push reforms through without government support mean they are much less likely to be implemented or sustained.

There is also scope for further use of regional approaches in the Pacific, to reduce fixed costs and capacity constraints. Rodgers (2013) notes that the rationale for multi-country or regional approaches will generally strengthen as country size diminishes. One example is the Pacific Region Infrastructure Facility (PRIF), a multi-agency mechanism coordinating the delivery of development assistance from donors and development partners to the infrastructure sector in the Pacific region. Through the PRIF, representatives meet on a quarterly basis to exchange views on their respective programs, share knowledge, and agree on the financing of analytical work that is requested by client countries to help identify new projects. The aforementioned World Bank review found that in several cases (including aviation and marine fisheries projects), the use of multi-country platforms was useful in addressing capacity constraints and transaction costs, both for the clients and for the World Bank. For instance, the use of a single Technical Fiduciary Service Unit (TFSU) in support of various aviation projects (based in Tonga) was able to combine procurement packages for different countries and obtain more favorable terms than would be possible under individual contracts. The TFSU also provided useful support for other aspects of project implementation. Strengthening institutional capacity to manage the uncertainties around deep sea mining is another area where regional cooperation could be of particular value.⁴²

Fragmentation is of particular concern when it comes to financing for climate change adaptation and risk reduction investments, which is currently provided from a range of sources in the Pacific. In addition to the traditional development partners, these include, inter alia, the Global Environmental Facility, the Adaptation Fund, the Global Facility for Disaster Reduction and Recovery, and the Green Climate Fund. The PICs have already drawn on many of these sources of climate finance. Samoa, Fiji, Papua New Guinea and the Solomon Islands were all among the top 10 recipients of approved climate financing to small island developing states over 2003-15 (ODI climate funds update, 2015).

While there have been some improvements – e.g. the use of several sources of funding to finance one project using a single set of procedures and PMU – fragmentation remains a source of inefficiency. In the four years to 2015, Samoa managed 12 different projects on climate and disaster resilience, the Solomon Islands 22 projects, and Kosrae – a state of 6600 people – managed 15 different projects (SISRI Pacific Islands Road Map 2015). Anecdotal evidence and evidence from disbursement rates (see below) suggests that this fragmentation creates a significant burden for recipient governments.

Reducing the fragmentation of projects and financing sources will require further efforts from both PIC governments and development partners. Development partners may need to adjust or give up their individual

⁴² See World Bank (2016), *Precautionary Management of Deep Sea Mining Potential in Pacific Island Countries*, Pacific Possible background paper.

flagship programs in favour of a more coordinated approach, including through joint financing of projects. An analysis of the difference between actual and planned disbursements for resilience projects showed that most PICs showed weaker absorptive capacity than Caribbean countries⁴³, highlighting the importance of alleviating capacity constraints through better donor coordination where possible, and reinforcing in-country implementation capacity where necessary. PIC governments should aim to define prioritized investment plans (encompassing both existing and new infrastructure and resilience-building activities) and supervise their implementation.⁴⁴ Ideally, these plans should act as a screening mechanism for climate resilience related project proposals, and as a means of marshalling additional funds where financing gaps have been identified. Careful evaluation of proposals is necessary given some ex ante measures such as retrofitting may not be cost-effective in all circumstances.⁴⁵

d. Macroeconomic effects

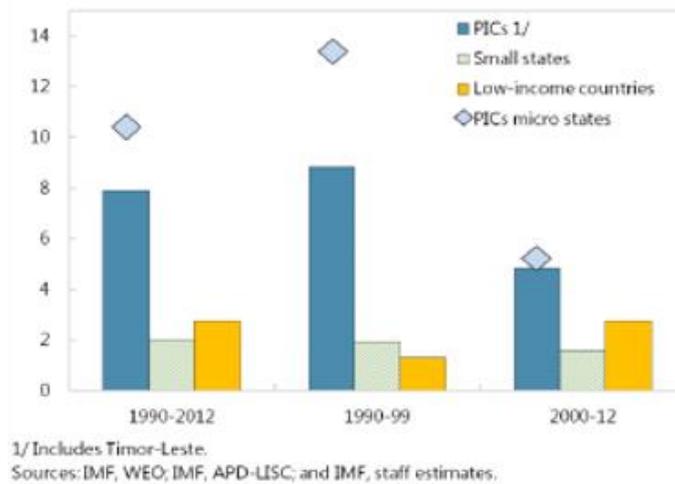
A common critique of development assistance is that it is volatile and unpredictable, which makes management of aid flows more difficult and can have adverse macroeconomic effects. Volatility in aid flows makes it difficult for recipient governments to establish stable spending levels for policies and initiatives that are tied (either via legislation, PFM system, or general principle) to those flows, and inhibits their ability to sensibly budget for future expenditures (Dornan and Pryke, 2017). It can thus increase public expenditure volatility in the absence of strong PFM frameworks and, in practice, has been found to magnify business cycles in some recipient countries (e.g. Kharas, 2008).

Volatility of aid presents an ongoing challenge for PIC governments. While aid volatility in the Pacific has declined in the past decade (relative to the 1990s), it remains much higher than in other small states (Figure 74). This is potentially of concern for many PICs, to the extent that aid volatility manifests itself in overall revenue volatility, expenditure volatility and pro-cyclical fiscal policy, as is often the case in small aid-dependent states (IMF 2015).

⁴³ See SISRI (2015), Pacific Islands Road Map.

⁴⁴ This is the broad objective of the National Adaptation Planning (NAP) process which is a requirement for the Green Climate Fund (see SISRI 2015).

⁴⁵ See World Bank (2016), *Climate Change and Resilience*, Pacific Possible background paper.

Figure 74: Volatility of grants over time (% of GDP)⁴⁶

In part, volatility of aid reflects poor predictability of aid flows. Realized aid flows often deviate considerably from what was planned, even in the absence of natural disasters or other external shocks. This problem has been shown to be particularly acute in the Pacific, even after excluding flows associated with humanitarian aid, natural disasters and debt relief (which may all be inherently unpredictable) (Dornan and Pryke, 2017). Unpredictability can potentially lead to inefficiency in capital spending, for instance if investment plans need to be altered frequently due to unanticipated changes in aid flows. In countries (such as the Compact countries) where grants are necessary to fund current expenditures, such fluctuations could also adversely affect the provision of public services. While budget support in other PICs has generally been a more predictable source of funds, there have been some notable exceptions (Horscroft, 2016).

However, variation in aid flows over time can be desirable if it counteracts volatility in the domestic economy. In the best case, aid flows can substitute for fiscal policy in playing a macroeconomic stabilization role. For instance, aid flows tend to increase in the wake of natural disasters when the need for government expenditure is greatest, both to fund the necessary rebuilding of the capital stock but also to provide a macroeconomic stimulus. Figure 75 shows that while volatility of grant aid tends to be higher than volatility of domestic revenues, in a number of cases (Kiribati, Tuvalu, FSM, and Tonga) grants act to reduce the volatility of overall revenues, suggesting that they have a broadly stabilizing influence. In Vanuatu, Solomon Islands, and Samoa, on the other hand, grants have acted to increase the volatility of overall revenues over the past decade. However, this could also reflect necessary donor responses to exogenous shocks, rather than volatility and unpredictability of aid flows in ‘normal’ times. In any case, the PICs appear to manage variation in overall revenues reasonably well from a macroeconomic perspective, with observed volatility in public expenditures lower than revenue volatility in most cases (Figure 76).

⁴⁶ Reproduced from Allum and Tumbarello (2013), *Macroeconomic Issues of Small States: Are the Asia and Pacific Small States Different from Other Small States?*, presentation at Australian National University, 19 November.

Figure 75

Volatility of grants and domestic revenues

Coefficient of variation, 2006-15

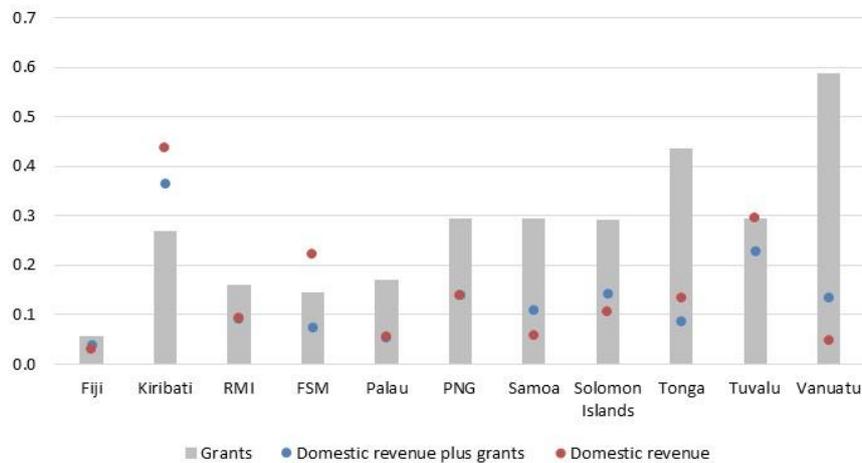
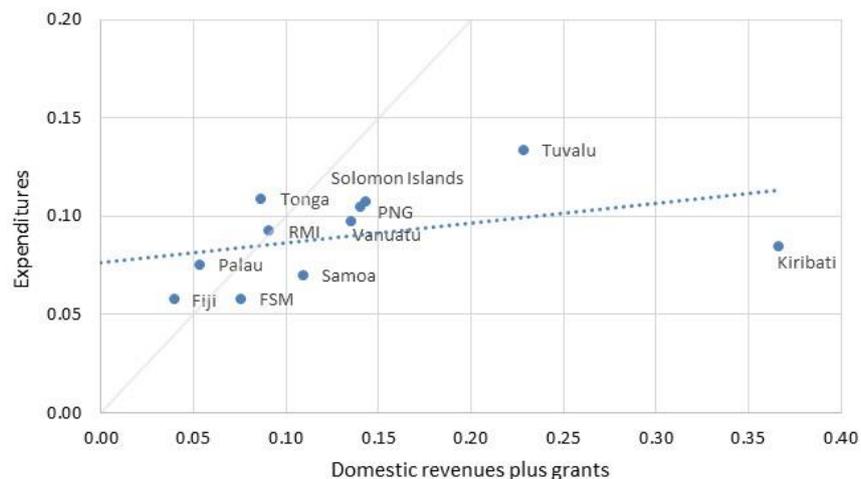


Figure 76

Volatility of total revenues and expenditures

Coefficient of variation, 2006-15



e. Summing up and recommendations

Given the specific structural constraints to growth faced by many of the PICs, the positive effects of aid are more likely to be apparent in overall macroeconomic stability and the continued funding of public services than in economic growth per se. The fact that several PICs appear to achieve comparatively strong development outcomes given their geography and level of public spending per capita – a relatively large proportion of which is financed by aid – indicates that aid is likely to be broadly effective in these countries.

For those PICs with stronger capacity, budget support aligns closely with aid effectiveness principles. At its best, general budget support has the potential to facilitate coordination among development partners and reduce the negative impacts of fragmentation, while enhancing government ownership of policy reforms and promoting the alignment of aid with national priorities. But results from budget support operations can

sometimes be unconvincing, and measures to incentivize the implementation of supported policy reforms may be as or more important as the reforms themselves. Sector budget support may be appropriate in engagements with a more technical and clearly defined focus, but it is important to encourage whole-of-government engagement with supported reforms, including by clarifying the relationship with general budget support in countries where both modalities exist side-by-side.

Given pronounced infrastructure deficits, project aid has and should continue to play an important role in the PICs. Given thin and stretched capacity in PIC government ministries and agencies, continued efforts are needed to reduce transaction costs, and projects should aim to build the institutional capacity of client governments where possible. To the extent possible, individual projects should be coordinated between development partners and consistent with the national objectives of the recipient country. There is also scope for further use of regional approaches in the Pacific, to reduce fixed costs and the impact of capacity constraints. To support national planning mechanisms, project aid flows should be as predictable as possible in 'normal' times and responsive to external shocks and natural disasters when they strike.

In many cases non-traditional approaches to technical assistance may lead to more sustainable impacts in the Pacific context. In particular, capacity supplementation may be more effective than capacity building in some specialized areas. TA is also likely to be more effective to the extent that it is problem-based, aligned with government demand and priorities, and closely-integrated with other aid modalities.

Aid should be treated as an important component of PICs' overall strategies for financing the recovery and reconstruction requirements associated with natural disasters. These strategies should reflect both time and cost dimensions, ensuring that the volume of funding available at different stages of the response matches actual needs in a cost-efficient manner. Aid may impose few direct financial costs but its availability can be uncertain and it often takes some time to arrive after a disaster, with these delays potentially costly in terms of social and economic welfare. Other financing instruments can be activated more rapidly (self-insurance, parametric insurance, contingent credit) but are generally more costly. Because the specific costs and benefits associated with each of these mechanisms will vary across countries, the appropriate mix of these instruments needs to be considered on a case-by-case basis. As a general rule, development partners should attempt to simplify the suite of available financing instruments and provide a clear rationale for each in the Pacific context.

Ex post development partner financing is likely to remain the major source of finance for longer-term reconstruction efforts in the Pacific, and hence there is a need to address the common critiques of post-disaster aid delivery. Delays and uncertainty in the provision of aid after a disaster can be costly in terms of social and economic welfare. To the extent possible, measures should therefore be taken ex ante to reduce the likelihood of delay ex post. As with all aid, coordination across donors to reduce the fragmentation of projects, and close alignment with government plans and priorities is critical in the aftermath of a natural disaster.

For PICs with stronger capacity, it may make sense for development partners to allocate more aid toward subsidizing insurance or other contingent finance mechanisms. These could allow PIC governments more control over post-disaster spending and incentivize their proactive management of disaster risks. Where possible, these schemes should be designed so that the 'crowding out' of existing aid is minimized.

To ensure the appropriate level of investment in resilience-building activities, donors and development partners need to work together to boost the accessibility of the various climate funds, and reduce the fragmentation of projects and financing sources. PIC governments should aim to define prioritized investment plans and use them to screen project proposals and marshal additional funds where necessary. Development partners may need to adjust their existing programs in favor of a more coordinated approach, including through the joint financing of priority projects.

Annex 1 – Data sources

The modelling exercise undertaken in this paper has used a collection of data sources which are outlined below. In some cases it has been necessary to combine the various datasets, giving rise to some inconsistencies. The approach to overcoming these is also discussed below.

[IMF/World Bank – Article IV, Debt Sustainability Analysis historic data and projections \(various years\)](#)

Data from the DSAs have been used where possible. These data and projections constitute the best estimates of IMF/World Bank country economists at the time of the AIV missions. The data used included data on primary expenditure, revenues and grants received, GDP deflator, interest rate on public debt, the stock of public debt, and GDP. Baseline scenarios for expenditure, revenue and aid grant projections are predominantly based on, if not identical to, those developed in the most recent DSA for respective countries.

[IMF – World Economic Outlook \(October 2015 vintage\)](#)

Data from the World Economic Outlook (WEO) database has been drawn on to formulate the alternative expenditure and grant aid scenarios. For the expenditure scenarios, the WEO data provided a longer history of public expenditure data than was available from the DSAs, thereby enabling projections that are more consistent with the long-run performance of each country. For grant aid projections, WEO GDP projections out to 2020 of major countries and key country groupings were used.

[OECD Creditor Reporting System \(late 2015\)](#)

Data from the OECD's official development assistance creditor reporting system on aid flows to the Pacific has been used. This database provides a donor-by-donor breakdown of aid flows to each of the PICs, enabling modelling of assumptions on a donor-by-donor basis when constructing projections for each recipient. This data source does not however include aid from several non-DAC countries such as India, China, and Saudi Arabia.

[United States Government Accountability Office \(GAO\) and Pacific and Virgin Islands Training initiatives \(PITI-VITI\) data](#)

Information on grant flows from the US to the Marshalls, Micronesia and Palau was gathered from Section 211 of the Compact of Free Association, as well as from GAO reports on the Compact arrangements, and economic statistics published by PITI-VITI. These have been used in making some adjustments to DSA-reported grant aid flows for Palau, and in constructing the alternative grant aid scenarios for RMI and FSM.

[Lowy Institute – Chinese Aid in the Pacific \(early 2015\)](#)

Total Chinese aid flows to the region for the period 2006-13 were sourced from the Lowy Institute's Chinese Aid to the Pacific project, with annual flows estimated based on changes in total aid flows to each PIC. These estimates were combined with OECD data on the ODA provided by other donors.

[United Nations Population Fund \(July 2015\)](#)

UN population projections were used in constructing per-capita-based targets for the value of total assets under sustainable scenarios for PIC trust funds.

[World Bank World Development Indicators](#)

WDI data was used for charts including historic data and related discussion.

[World Bank Unified Survey](#)

Unified survey data was used for charts containing data on historic revenues and expenditures.

Annex 2 – Methodology for aid projections

Adjusting the data

Several inconsistencies exist between the OECD and DSA datasets owing to different reporting regimes and underlying primary data sources. While the DSA grant data typically represents the financing perspective of the recipient based on the reporting standards employed by the Ministry of Finance, the OECD employs a more comprehensive reporting framework that is more closely aligned with the perspective of international donors.

There are some discrepancies between the IMF and OECD datasets. DSA grant flows for recipient countries were used as the high-level aggregates (i.e. the values for total grant aid received from all donors), while the breakdown by donor of these flows was calculated (in most cases) based on donor shares in OECD data.

In the case of Fiji, the AIV/DSA data did not delineate between domestic revenues and grants received. Consequently, an alternative IMF source on historic flows, the Government Finance Statistics, was utilized as the source of high-level aggregates. The baseline projection for Fiji's grant flows assumes grant aid remains constant as a proportion of GDP until 2040.

Modelling of aid scenarios

There are three scenarios:

- Baseline
- Aid-to-gdp fixed
- Real value fixed

In all three scenarios, US compact grants to RMI and FSM are assumed to end. In the baseline scenario, the most recent DSA trajectories incorporate this automatically in the overarching grant aid figures, whereas in the modelling of the remaining scenarios, US aid flows to RMI and FSM are based on World Bank estimates. Given that the US is by far the predominant donor to these two countries, this approach limits the variation in the projected grant flows to RMI and FSM under the different scenarios.

Annex 3 – Methodology for trust fund projections

Assumptions underlying the 'status quo' scenario

The status quo model is designed to generate TF drawdowns (and contributions) based on the way each fund currently operates, including any rule-based limits/targets. This then provides, for any given trajectory of the budget financing gap (excluding trust fund flows), a projection of the fiscal balance once trust fund flows are accounted for. It also demonstrates how viable current SWF drawdown approaches are in the long run.

Kiribati – Revenue Equalization Reserve Fund

The RERF operates on a single-account structure.

1. The RERF receives investment returns assumed to be at 6% and these are reinvested.
2. Administration fees are assumed to be 0.8% of net funds and are deducted. This assumption is based on the rate paid by the Tuvalu Trust Funds in 2007.
3. If there is a budget surplus, the surplus is deposited in the RERF.
4. If there is a budget deficit, the budget deficit is fully financed by a disbursement from the RERF, subject to available funds.

The Kiribati budget and the RERF are integrated, with fiscal surpluses deposited into the fund and any fiscal deficits financed via drawdowns. There are no rules on withdrawal limits, although the parliament in 1996 agreed in principle to hold the RERF real per capita value constant at A\$4,700 (in 1996 A\$).

Tuvalu – Tuvalu Trust Fund & Consolidated Investment Fund

Tuvalu has a 2-account setup.

A account (Tuvalu Trust Fund):

1. The TTF has a 'maintained value' which is a benchmark target balance indexed to inflation and boosted also by any new contributions to the TTF by governments.
2. We assume that all budget surpluses will be transferred directly to the TTF.
3. Investment returns are assumed to be at 6% and these are reinvested.
4. Administration fees are deducted at 0.8% of net funds (based on funds across both the TTF and CIF).
5. If the market value of the TTF (which includes investment returns) rises above the maintained value, then the surplus is disbursed into the Consolidated Investment Fund.

B account (Consolidated Investment Fund):

1. The CIF receives disbursements from the TTF in some years.
2. Investment returns are assumed to be at 6% and these are reinvested.
3. If there is a budget deficit AND the CIF balance is greater than 16% of the TTF maintained value, then the CIF will disburse to the budget an amount no greater than the minimum of: a) the value of the deficit and, b) the surplus of the CIF over 16% of the TTF's maintained value.

Palau - Compact Trust Fund

The Palau CTF has a single account setup.

1. The CTF receives annual contributions from the USA up to and including 2023.
2. If there is a budget surplus, the surplus is deposited in the RERF.

3. Investment returns are assumed to be 6% and these are reinvested.
4. If there is a budget deficit, the CTF will be drawn upon to reduce it. Drawdowns are capped at a linearly increasing ceiling of between 5m and 13m from 2015 to 2023 and 15m from 2024 onwards⁴⁷.

Compact Trust Funds for the RMI and FSM.

The RMI and FSM CTFs have a 4-account structure.

A account (main corpus):

1. At the end of the year, A receives investment income on its corpus.
2. Transfer of investment returns:
 - a. Prior to 2023, returns up to 6% are reinvested in A, while any return above 6% is transferred to C.
 - b. From 2023, all investment income earned by A is transferred to B.
3. If B has a closing balance that is in excess of 2023 grants adjusted for 2/3 inflation, some of this excess may be transferred to A.
4. If C's balance surpasses 3 times the 2/3-inflation adjusted 2023 grants level, this excess is transferred to A.
5. Administration fees are deducted.

B account (a transactions account for channeling funds to the budget; established in 2023):

1. At the end of the year, B receives all of the income earned on A's corpus.
2. If a budget deficit exists, B will disburse as much as is available, up to a ceiling of 2023 grants adjusted for 2/3 inflation.
3. If the real value of A's transfer to B falls short of the previous year's disbursement AND if there is a budget deficit AND if B's standard disbursement is insufficient to balance the budget, then C will be drawn on to plug the shortfall in real transfer from A to B. Subject to available funds, C will transfer to B an amount that is no greater than either of: a⁴⁸) the shortfall of this year's standard B disbursement below 2023 grants adjusted 2/3 inflation and, b⁴⁹) the shortfall of this year's standard B disbursement below the value of the budget deficit. Any such amount received by B from C is disbursed entirely into the budget.
4. After any disbursements to budget have been made, if funds remaining in B exceed 2023 grants adjusted for 2/3 inflation, this excess amount will be transferred to either A or C. Given the language used in GAO modelling documentation, we assume that transfers to C take precedence.
 - a. If B has excess funds, it will transfer this amount to C up to a ceiling calculated as the shortfall of the C account balance below 3 times the value of full-inflation adjusted 2023 grants⁵⁰.
 - b. Any excess funds that are not transferred to C are transferred to A.

C account (a stabilization account):

⁴⁷ Under the original 1994 agreement, the ceiling on withdrawals from the CTF would be raised to of 15m from 2010. However, proposals put forth by Palau in 2010 and that are before the US Congress, stipulate a plan to gradually raise withdrawals to 13m by 2023, and then 15m from 2024 onwards. Drawdowns to date have been fairly consistent with this (and close to 5m). This is what is assumed in both the PITIVITI forecasts and IMF's long-run fiscal sustainability analysis in the 2014 AIV.

⁴⁸ i.e. it will not allow B's total disbursement to surpass B's disbursement limit.

⁴⁹ i.e. it will only give enough so that B's total disbursement can cover the deficit.

⁵⁰ i.e. it will not push C above its ceiling.

1. C earns investment income on its balance. The rate of return is the same as that in A, as it is invested as part of the same portfolio and held as a sub account.
2. In the years prior to 2023, any investment returns in A above 6% are transferred to C.
3. If these inflows raise C's balance above 3 times the 2/3-inflation adjusted 2023 grants level, the surplus is transferred to A.
4. From 2024, if the real value of A's transfer to B falls short of the previous year's disbursement AND if there is a budget deficit AND if B's standard disbursement is insufficient to balance the budget, then C will be drawn on to plug the shortfall in real transfer from A to B. Subject to available funds, C will transfer to B an amount that is no greater than either of: a) the shortfall of this year's standard B disbursement below 2023 grants adjusted for 2/3 inflation and, b) the shortfall of this year's standard B disbursement below the value of the budget deficit.

D account (the government's unrestricted account):

1. D earns interest on its balance. We assume that this is at the same rate as that of A.
2. If the budget is in surplus, the surplus funds are transferred to D.
3. If there is a budget deficit, D may be drawn upon to reduce it.
 - a. Prior to 2024, there is no ceiling on the amount that D will disburse to the budget.
 - b. From 2024, D disburses to the budget as a last resort, only if a deficit remains after transfers from the B and C accounts have been processed.

[Assumptions underlying the 'sustainable' scenario](#)

The sustainable scenario imposes a real per capita target on the combined funds available for drawdowns across all related SWF accounts. For RMI and FSM that will continue to receive large US Compact grants (and TF contributions) until 2023, the per capita target is set at the expected value of the fund at the end of 2023, whereas for the remaining countries, per capita targets are determined according to total fund levels as at end of 2015.

The different treatment of RMI and FSM owes to the legislated limits on any drawdowns prior to 2024, intended to build up the reserves of their trust funds before the expiry of general Compact grants. These limits provide for a considerable level of confidence over accumulation and drawdowns in the first decade of projections.

These targets are not intended to imply that current asset levels are optimal. Instead this scenario is intended to address the question of whether TFs can finance deficits while maintaining their per capita real value, thereby preserving their sustainability over the long-term.

Annex 4 – References

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