ARCHIPELAGIC ECONOMIES
Spatial Economic Development in the Pacific

Synthesis report
Edited by Robert J. Utz
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Synthesis report
Foreword

Archipelagic Economies is a pathbreaking investigation into challenges that Pacific nations face. The region is truly unique – not only from a historical and heritage perspective that includes local cultures with isolated traditions and ethnic organizations but also from a singular geography. To summarize the Pacific region’s conundrum, it is often easier and faster to travel from Washington, D.C., to New Delhi, India, than from Suva, Fiji, to Majuro, Marshall Islands.

This study is a companion piece to the highly influential Pacific Possible report. Pacific Possible identified economic opportunities that might be exploited for economic growth (including tourism, fishing, digital connectivity, labor mobility) by very small and remote economies. As a follow-up, Archipelagic Economies examines pathways toward inclusive development in a highly fragmented geographic context (quality education, transport, health, urban development, support to livelihoods).

The study provides a concise and highly compelling articulation of the singular and extreme characteristics of the Pacific Archipelago – nation states that often encompass hundreds of small islands that span thousands of square kilometers of ocean. More importantly, it provides concrete steps that countries can take to overcome these challenges. While countries have no control over their geographic remoteness, land dispersion, resources, and size, they do have tools to mitigate what these geographic challenges pose to economic development, such as facilitating the movement of people and adopting mechanisms to better allocate scarce resources across the isolated small islands. To this end, growth-enhancing investments should be guided by clearly identified opportunities rather than by a desire to equalize the nominal value of investments across islands. Likewise, remoteness and small populations on outer islands suggest that preference should be given to investments in mobile assets, especially human capital, and social protection mechanisms. Investments that promote human capital have the great advantage of broadening peoples’ capacity to take advantage of economic opportunities on outer islands or elsewhere; at the same time, they serve as an important element of human development itself. These investments are also less vulnerable to risks from natural disasters and climate change. By contrast, the high levels of investments in physical capital with modest economic returns on outer islands crowd-out human capital investments and are highly vulnerable to natural disasters and climate change.

The current COVID-19 crisis has laid bare the cost of not addressing pre-existing institutional, service-delivery and capacity gaps in the Pacific’s small island states, making this study even more important and timely. Health systems that can deliver essential services such as testing and vaccines to all citizens and effective social protection mechanisms would likely have eased the initial impact of the crisis and could facilitate economic recovery as treatments and vaccines become available. The pandemic hopefully will not recur in anyone’s lifetime, but the Pacific is no stranger to shocks. The Samoa measles outbreak in 2019, frequent natural disasters like Tropical Cyclone Harold in April 2020, and the looming prospect of disruptions from climate change, all remind us of the Pacific region’s vulnerability.
While COVID-19 now occupies our minds, we should not be paralyzed by it. Rather, it should be an opportunity to reflect on the underlying challenges facing the Pacific that have exacerbated the crises and to formulate strategies to address them. Crisis is often defined as "a time of great danger, difficulty, or confusion when problems must be solved or important decisions must be made."1 This definition suggests that during these times of uncertainty and economic instability, opportunities arise for decisive change. Now is a time for the Pacific nations to consider how to capitalize on these opportunities for change to improve the lives of their populations.

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Acknowledgements

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The study is published in two volumes. Volume 1 is the synthesis report prepared by Robert Utz with the assistance of Richard Alm (Consultant, World Bank). Volume 2 is the main report, containing the following chapters:

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### Acronyms

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<tr>
<th>Acronym</th>
<th>Description</th>
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<tr>
<td>ADB</td>
<td>Asian Development Bank</td>
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<td>AUD</td>
<td>Australian Dollar</td>
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<td>BNPL</td>
<td>Basic Needs Poverty Line</td>
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<td>EFI</td>
<td>Equitable Growth, Finance, and Institutions</td>
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<td>FPL</td>
<td>Food Poverty Line</td>
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<td>FSM</td>
<td>Federated States of Micronesia</td>
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<td>GDP</td>
<td>Gross Domestic Product</td>
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<td>GIS</td>
<td>Geospatial Information System</td>
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<td>HIES</td>
<td>Household Income and Expenditure Survey</td>
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<td>ICT</td>
<td>Information and Communication Technology</td>
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<td>IPCC</td>
<td>International Panel on Climate Change</td>
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<td>LTCSS</td>
<td>Long-term Coastal Security Strategy</td>
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<td>MP</td>
<td>Member of Parliament</td>
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<td>NCD</td>
<td>Non-Communicable Disease</td>
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<td>NDP</td>
<td>National Development Plan</td>
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<td>PFM</td>
<td>Public Financial Management</td>
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<td>PIC</td>
<td>Pacific Island Country</td>
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<td>PNG</td>
<td>Papua New Guinea</td>
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<td>RMI</td>
<td>Republic of Marshall Islands</td>
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<td>SPC</td>
<td>South Pacific Community</td>
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<td>WDR</td>
<td>World Development Report</td>
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This study explores the far-reaching economic consequences emerging from the archipelagic nature of most Pacific Island countries (PICs). The dispersion of populations across thousands of miles of ocean and hundreds of islands magnifies the economic disadvantages arising from the remoteness and small size that characterize the PICs as a whole. At the same time, population dispersion creates extraordinary challenges related to public service delivery, connectivity, migration and urbanization, and the equity and inclusiveness of economic development. This study focuses on these challenges in pursuit of two main objectives:

• Deepening the understanding of socio-economic conditions on the PICs’ outer islands and the drivers of migration from outer islands to main islands.
• Reviewing the policy and investment options for fostering the socio-economic development of outer islands populations.

Most PICs are archipelagos consisting of a large number of inhabited islands, with Nauru the only PIC consisting of a single island. The study distinguishes between PICs’ main and outer islands. The main island is home to the capital city and, except for Solomon Islands, the island with the largest population. In addition, the main island holds a privileged position as the seat of government and most public sector institutions as well as the locus of vital sea- and air-transport that connects the PIC to the rest of the world. A main island typically offers more economic opportunities, better access to a wider range of public services, and many social and cultural benefits.

Outer islands show great heterogeneity, starting with topography. Island types range from low-lying reef islands to uplifted volcanic islands. Land area and population vary, with many smaller outer islands having fewer than 1,000 people and a few large outer islands spreading more than 100,000 people over sizeable land areas. Outer islands also differ with respect to distance to the
main island and other islands, with some forming clusters of islands in close proximity and others separated from the next island by hundreds of kilometers of open ocean. The characteristics of outer islands shape economic opportunities and challenges. Compared to volcanic islands, for example, low-lying reef islands have limited agricultural potential and a higher vulnerability to some impacts of climate change, particularly rising sea levels. More remote and smaller outer islands typically face greater challenges with respect to public service delivery and connectivity. Heterogeneity implies outer islands differ with respect to their specific development needs, opportunities, and priorities. Nonetheless, these remote places share a set of challenges – access to public services and economic opportunities, limited connectivity, the balancing of the costs and benefits of migration to urban areas, and lower living standards compared to their respective main islands. The severity of the challenges differs from one island to another.

Census data confirm the systemic differences between PICs’ main and outer islands. The variations reflect many factors – significantly higher unit costs for public service delivery and infrastructure investments in more remote places; location-specific needs, priorities, and technical feasibility; and, of course, decisions by policymakers. The PICs have in large part succeeded in providing basic health and education services to their citizens, no matter where they live. However, formal sector employment and incomes tend to be significantly higher on main islands than on outer islands, where subsistence agriculture and fishing tend to be the main sources of livelihood. Infrastructure – such as roads, electricity, and water and sanitation – is generally much less developed on outer islands than on main islands. Such spatial differences in socio-economic indicators are not unique to the PICs. Large countries with strong economies, such as Australia, Canada, or the US, also show large differences in socio-economic indicators between central and remote populations. However, unlike small PICs, these countries typically have strong leading regions with large populations that generate resources to provide a wide range of public services, infrastructure, and other forms of support for people living in lagging regions with small populations.

Weaker socio-economic indicators on the outer islands are not always reflected in poverty incidence that is higher than on main islands. Several factors contribute to this. First, methodological issues make comparisons difficult and suggest a mixed picture across the PICs on whether urban or rural poverty levels are higher. Second, access to subsistence agriculture and fishing mitigate poverty on outer islands. Third, governments support incomes on outer islands through such schemes as public sector employment or subsidies for production. Fourth, differences in inequality on main and outer islands also influence subnational poverty incidence – thus, even if average incomes are lower on outer islands, lower inequality on the outer islands can offset the impact of lower incomes on poverty incidence.

Strong representation of the PICs’ outer islands in national parliaments typically results in significant policy efforts aimed at narrowing spatial inequalities. However, interventions frequently run into impediments – for example, the high cost and complexity of providing public goods on outer islands, the geographic disadvantages of small size and remoteness that severely constrain the production of tradeable goods, and the sometimes weak match between what can be provided and the priorities and needs of outer island populations. As a result, the interventions frequently have limited effectiveness in improving the lives of outer island residents. Examples include infrastructure investments that are very costly, difficult to maintain, and often of limited use in outer islands’ contexts or production subsidies that can create manifold distortions in economic and social activities.

Creating employment and cash-income opportunities on the outer islands is an important policy objective in many PICs. However, schemes aimed at establishing/subsidizing the production of tradeable goods and services on outer islands are often costly, not economically viable, and difficult to sustain given the competitive disadvantages created by PIC geography. They also have the potential to create distortions in household production and consumption behavior,
with adverse economic and social consequences. For example, several countries (Kiribati, RMI, Vanuatu) subsidize the price of copra produced on outer islands. As of December 2019, the subsidized price of copra in Kiribati was AUD2/kilogram, significantly higher than global prices (Philippine farmgate prices were around AUD0.45/kilogram at the time). The government’s budget allocates around 10 percent of Kiribati’s GDP to copra subsidies, around the same as the government’s health spending. The high subsidy has reportedly resulted in less household effort devoted to fishing, subsistence agriculture, and community activities and more consumption of unhealthy imported goods. Subsidizing non-tradeable activities with high social benefits for outer island populations might be a preferable option for creating employment and incomes. This could include activities that enhance the outer islands’ resilience to natural disasters and climate change, help preserve their fragile ecosystems, and enhance food security through support for agricultural activities. An important advantage of such activities is that they usually can be implemented with local resources and labor, generating incomes as well as social benefits for outer island populations.

The outer islands’ geographic disadvantages mean economic returns to investments in physical capital tend to be low – or actually highly negative for many activities. It would make better economic sense to give priority to investments in human capital – i.e., high-quality public services, especially in education and health – and physical investments that contribute directly to improved living standards. New information and communications technologies (ICTs) can provide pathways to enhanced access to public services in remote locations. However, just having the investment in place does not always translate into better social outcomes. Investments need to be supported by sound management of public finances, good governance, adequate human resources, and demand-side accountability. Communities need to be part of the decision-making process regarding the provision of local services. The institutional arrangements that have emerged do not always ensure that centralized decisions reflect local demands.

High unit-cost differentials between outer and main islands in the delivery of social services and infrastructure suggest that welfare would be maximized by a focus on areas of higher population density. Outer island interventions have a high opportunity cost in terms of forgone lower unit-cost interventions on the more densely populated main islands. At the same time, important linkages that bind outer and main islands are often not reflected in policy decisions – especially the various forms of temporary and permanent migration and the family and community ties between people on main and outer islands. Combined with the anti-internal migration bias of many policymakers in PICs, this leads to an underinvestment in urban development on main islands, including expenditures that would be necessary to accommodate the inflow of migrants from outer islands. The results are inefficient outcomes for both main and outer islands.

Connectivity by sea, air, and ICTs creates essential economic and social lifelines for outer island populations. Large distances combined with small scale and fragmentation result in poor and costly sea and air transport services. Some approaches for delivering services through public-private partnerships have resulted in better and less costly services, but these outcomes are contingent on sufficient state capability for design and regulation of such arrangements. Previous efforts for regional collaboration to overcome small size and fragmentation have proven difficult to sustain; even so, PICs should consider enlarging markets through liberalizing entry and joining together in efforts for greater standardization. For outer islands, enhanced ICT connectivity is a recent and positive phenomenon, with the development of a range of technical solutions to connect remote locations. The choice of the appropriate mix of technologies will require careful cost-benefit analysis based on realistic assessment of service needs. Some countries are already using ICT connectivity to strengthen education and health services on outer islands. However, the potential of enhanced ICT connectivity to facilitate new economic activities and improve productivity in the small island economy context still remains to be realized.
Migration provides access to enhanced economic and social opportunities, and it is an important element of economic development for most PICs. Migration, whether short-term, long-term, permanent, circular, internal, or international, sits at the heart of Pacific opportunity and connectivity. For most islands, out-migration does not result in a dramatic decline in population but helps to keep it stable and mitigate pressures on fragile outer island ecosystems. Census data tend to show migration to areas with higher incomes, more employment opportunities, and less remoteness. Internal migration will on average lead to higher incomes and improved economic well-being for the migrant households. In addition, it will improve access to services necessary for increasing human capital, including health and education. However, migrants may lose access to traditional safety nets such as kinship networks and subsistence agriculture and fishing and thus become more vulnerable to hardships. The policy questions center on creating the conditions that support successful internal migration, including improved urban management.

Urbanization has been a decades-long phenomenon in the PICs, and national spatial planning policies can aim to better manage cities’ growth. Urban settlements that are well planned and managed present a pathway out of poverty and can reduce disaster risks. But without strong policies and investment, poor settlement development can fuel anti-urban bias and limit outer island opportunities. Key areas that require attention include strengthening land-administration policies and systems, upgrading basic services in informal settlements, developing new and well-planned settlements to accommodate future growth, and investing in trunk infrastructure to guide development onto safe, well-located land and promote private housing investment. Adapting to climate change and managing disaster risks has taken on greater urgency because urbanizing PIC populations are increasingly inhabiting settlements on marginalized and hazard-prone areas, such as floodplains, steep areas exposed to landslides, and coastal areas endangered by tsunamis and inundation.

In very remote locations where the reach of the state is limited, hybrid systems of governance have emerged, which can help bridge the customary and modern in such areas as justice and service delivery. But limited state reach also encourages MPs to act personally as patrons and service deliverers, seeking effective control of public funds for subnational development despite well-founded concerns about the efficiency and equity of such arrangements. The lack of oversight and limited participation of local residents in decision-making means that the public spending that does occur may not benefit local residents as much as expected. In many archipelagoes, extensive natural resources are remotely located. Jurisdiction over these resources is often centralized, leaving locals pitted unequally against nationally and internationally empowered operators, with negative environmental and social consequences.

The analysis of outer islands’ socio-economic conditions and their political economy point to a set of cross-cutting principles for spatial economic policymaking in the PICs. Specific recommendations on service delivery, enhanced livelihoods, connectivity, and migration and urbanization are presented and summarized in the section on policy options.

**Policy Principle #1:** Policy solutions that seek to achieve equitable increases in living standards need to be grounded in an understanding of the economic implications of the PICs unique economic geography. Extreme dispersion, small size, and remoteness not only differentiate the PICs from most other countries, but also makes them outliers among small states. Research and findings on other small states – some of which suggest that they can and indeed do achieve remarkable development progress with the right policies – cannot be easily applied to the PICs without taking this extreme geography into account.

**Policy Principle #2:** Outer islands’ development should be assessed from a spatial perspective that considers the manifold interactions with the PIC’s main island (and, indeed, the world beyond). This includes a focus on people rather than places and the importance of temporary,
circular, and permanent migration as an important pathway for people from outer islands to improve their living standards. The process will involve tradeoffs between equity, efficiency, and other objectives because outer island interventions typically carry much higher cost per beneficiary than those on less remote and more densely populated islands.

**Policy Principle #3:** A balanced approach that combines investments in urban areas to accommodate migration from outer islands to main islands with support for outer island populations is likely to achieve better welfare and equity outcomes than an approach that neglects one side or the other. If well managed, migration from outer islands to main islands can bring benefits for the migrants, existing residents in urban areas, and communities remaining on the outer islands. For most islands, out-migration does not lead to a significant decline in population but helps to keep it stable and mitigate pressures on fragile outer island ecosystems.

**Policy Principle #4:** Growth-enhancing investments should be guided by clearly identified opportunities rather than by a desire to try to equalize economic opportunities across islands. The PICs’ small size and remoteness severely limit the scope to create enterprises that are internationally competitive. Spatially targeted policies to support investment-driven activities should be aimed at exploiting carefully studied and clearly demonstrated economic potential—especially with respect to tourism, agriculture, and extractive industries. Such opportunities are already scarce on the PICs’ main islands, and they are much rarer on outer islands, where distance from main islands and smaller populations add further constraints.

**Policy Principle #5:** With limited scope to close the gap in economic opportunities between outer and main islands, investments in physical assets to promote livelihoods and in mobile assets, especially human capital, should be given preference. Investments that promote human capital have the great advantage of broadening peoples’ capacity to take advantage of economic opportunities on outer islands or elsewhere; at the same time, they serve as an important element of human development itself. These investments are also less vulnerable to risks from natural disasters and climate change. By contrast, the high levels of investments in physical capital with modest economic returns on outer islands crowd-out human capital investments and are highly vulnerable to natural disasters and climate change.

**Policy Principle #6:** Outer islands are subject to a complex political economy of intra-island as well as outer island-main island relationships that need to be considered in development interventions. Development partner interventions need to take these into account to increase the likelihood that interventions respond to local needs and priorities and do not create conflicts over employment opportunities or other benefits created by a project or captured by a particular group. More than that, development partners need to pay more attention to ways their interventions can strengthen (or weaken) outer islands’ ability to represent their interests in a context of potential clientelism and lop-sided power relations favoring centrally located actors. Such attention would entail making intervention processes more transparent, deliberative, and open as well as making sure PICs’ capability to manage intra-island and outer island relations of these kinds are strengthened in program processes. All of these capabilities need not exist at the outer Island level; empowered central agencies with mandates to increase outer Islands’ voice in deliberations could also make important differences in many PICs.
The World Bank’s 11 small Pacific Island member countries consist of 640 inhabited islands and atolls that make up the countries of Fiji, Kiribati, Republic of the Marshall Islands, Federated States of Micronesia, Nauru, Palau, Samoa, Solomon Islands, Tonga, Tuvalu, and Vanuatu. These countries are small specks of land scattered across a vast swath of the Pacific Ocean, north of Australia and New Zealand, south of Hawaii, east of the Philippines, and west of South America. Taken together, the islands are home to just 2.3 million people – equivalent to the population within Paris’ city limits spread over 76 million square miles, or 15 percent of the Earth’s surface. With ocean rather than land being their defining characteristic, the Pacific Island Countries (PICs) are sometimes referred to as Large Ocean States, a tribute to an omnipresent geographic reality often seen as connecting rather than separating the Pacific Islanders.

The PICs’ control over a vast expanse of the Pacific, their distinctive cultures, their island geography, and their floras and faunas create unique opportunities. At the same time, remoteness, small size, dispersion, exposure to natural hazards, and environmental fragility pose extraordinary economic development challenges. In most parts of the world, countries have grown richer by concentrating economic activity, collecting it in ever-larger urban areas, where big enterprises lower costs through specialization and economies of scale and agglomeration effects spur efficiency and innovation. This isn’t the reality facing the PICs. Their economies are largely defined by limits on scale economies and agglomeration, and high costs to travel, trade, and deliver basic services. The results have been slow growth and lagging living standards in most countries. The PICs’ unique geography also differentiates them from other small nations, and the region’s spatial eccentricities need to be taken into account when considering issues of economic development and performance.

2 Papua New Guinea is a larger economy but shares many of the challenges of the smaller archipelagic PICs. It contains many inhabited islands in addition to its mainland territory, and the mainland’s rugged geography contributes to communities remaining small and disconnected from each other. Nauru is the only PIC with just one island. Samoa consists of four inhabited islands in relative proximity to each other. Papua New Guinea, Nauru, and Samoa are not systematically included in the analysis.
A previous World Bank report titled *Pacific Possible* (2017) examined the economic development challenges arising from the PICs’ small size and remoteness from international markets. This *Archipelagic Economies* study complements and expands on the earlier one by focusing on the PICs’ “internal” geography, characterized by the extreme geographic dispersion of already very small populations over a large number of often very remote islands. This dispersion not only magnifies the economic consequences of small size and remoteness discussed in the earlier study, but it also creates additional challenges with respect to public service delivery on isolated islands, connectivity, internal migration and urbanization, and spatial inequalities in the access to economic opportunities and public services. These issues are the key focus of this report.

This overview summarizes the main findings in five parts. First, we present the objectives and outline of the full report. This is followed by a section which explains how the PICs’ external and internal geography are key determinants of socio-economic development outcomes and spatial inequalities. The third part presents data on spatial inequality with respect to a range of socio-economic indicators, public services, connectivity, and migration. In the fourth part, we discuss interactions between geographic dispersion and key political economy issues that shape spatial economic policy decisions and outcomes. The report concludes with a summary of policy options for dealing with the development challenges arising from geographic dispersion.
The economic geography of the PICs is unique and understanding its impacts on economic growth, public service delivery, and inequality is essential for the design of policies to promote shared prosperity and reduced hardships. At the same time, very little analysis is available on these issues, particularly the economic implications of geographic dispersion of small populations over a large number of islands, and policy options to deal with these have not been comprehensively documented and analyzed. The study has two main objectives:

- Deepening understanding of the socio-economic conditions on the PICs’ outer Islands and the drivers of migration from outer islands to main islands.
- Reviewing the policy and investment options for fostering the socio-economic development of outer islands populations.

Very limited availability of subnational economic data for the PICs as well as wide variations in outer island geography posed particular challenges for the preparation of this study. As a consequence, country coverage varies a little for the analysis of individual issues, driven by the availability of data as well as the relevance of a particular issue for specific countries. Nonetheless, the study seeks to identify broad tendencies to characterize spatial development issues and solutions in the PICs, while at the same time highlighting important differences across and within countries.

The main report consists of four major parts and 10 chapters:

First, “PICs in 3-D – spatial development with a Pacific twist” (chapter 1) discusses the unique economic geography of the PICs’ archipelagos and how it influences socio-economic outcomes. It places this new study within the broader framework of economic and human geography by
bringing together three strands of economic inquiry. The first is the World Bank’s 3-D (density-distance-division) framework for analyzing the interaction between geography and development. The second is economic development in the Pacific, which contributes a rich understanding of the structure and functioning of small PICs. The third is a prominent Pacific perspective that looks beyond the small, remote, and disconnected entities and highlights the ocean as a defining characteristic that connects the PICs’ people and islands – the Large Ocean States. Traditional strong personal, social, and economic links among island populations are deeply rooted in both economic geography and Pacific culture and societies’ determined approaches to maintaining relations, opportunities, and support over extremes of distance. Combining these threads provides a set of key principles for dealing with the challenges and opportunities inherent in the spatial fragmentation of most PICs. This is complemented by a review of the treatment of spatial development issues in the PICs’ policy priorities as expressed in their development plans.

Second, “Under the looking glass: socio-economic development on the outer islands” (chapters 2-5) brings together detailed information on the spatial distribution of PIC populations and related socio-economic indicators. A new set of indicators to measure population dispersion shows that the PICs’ citizens are among the world’s most internally dispersed. Census and household income survey data are used to examine key aspects of PICs’ socio-economic conditions and provide a sense of regional inequalities. We also highlight trends in internal migration largely driven by inequalities in socio-economic opportunities and access to public services.

Third, “The political economy of spatial development in the Pacific” (chapter 6) looks into the complex social, institutional, and political issues that underpin spatial development decisions and resource allocation. It shows that outer islands are not necessarily disadvantaged in political representation and state resources; however, real challenges remain in building institutions that effectively link remote populations’ needs, demands, and rights to effective, equitable investment and service delivery – and especially to legal and environmental protections.

Fourth, “Spatial development policy options” (chapters 7-10) examines challenges and options for improving the standards of living of outer island populations. This includes for increasing employment opportunities and incomes; strengthening public service delivery, with a focus on providing health and education services for increasing human capital; enhancing connectivity by air, sea, and ICT; and improved urban planning and management for the benefit of residents and migrants.

The Pacific Spatial Development report was conceived and its research largely concluded before the global COVID-19 pandemic created a global health and economic crisis in the early months of 2020. The virus and the policies implemented to control it were still roiling the world economy as the report was being finalized in November 2020. The remote, isolated PICs have not been spared the pandemic’s economic consequences (Box 1). Many of this report’s principles and policy implications are relevant in the context of dealing with the COVID-19 pandemic and the risks that new or re-emerging disease outbreaks will become more frequent and more severe.
BOX 1

COVID-19 and the PICs

Through November 2020, the reported COVID-19 incidence in the Pacific remained relatively low, and several PICs were among the handful of countries that had not reported any COVID-19 infections. A combination of the PICs’ geographic remoteness and prudent policies contributed to this outcome. Most Pacific countries were quick to prevent international travelers from entering, and several halted all commercial flights. States of emergency were declared, and physical distancing measures and business restrictions imposed.

Despite the Pacific’s low COVID-19 incidence, the global pandemic has taken a massive economic toll on most PICs. These include impacts from external sources (tourism, merchandise trade, and international labor flows and remittances) and domestic public health measures (e.g., the imposition of physical distancing requirements and restrictions on movement). For the countries most exposed to these consequences – including Palau, Fiji, Samoa, Vanuatu, Solomon Islands, and Tonga – income declines of 10 to 25 percent are possible for the 2020 calendar year.

COVID-19’s economic effects are likely to hit some outer islands particularly hard, while others are likely to remain relatively insulated from the worst impacts. Nevertheless, the experience of COVID-19 provides many valuable lessons. If applied, they are likely to have longer-term implications for outer island development and several of the options for improving livelihoods, public services, and connectivity discussed in this report. In addition, these lessons are relevant to how urban areas are planned and managed.

Public health impacts and risks

The PICs’ remoteness and separation by sea proved an asset for implementing preventive measures at the border. Entry points to the islands are limited to seaports and airports, allowing close control of immigration and more systematic health checks. The dispersion of population across islands could also help contain transmission if localized clusters of COVID-19 infections emerge. There have been instances of outer islands being locked down due to the possibility of exposure to COVID-19 – for example, from a cruise ship tourist in the case of Aneityum in Vanuatu. Emergency provisions have been used by PIC governments to restrict domestic travel.

Due to their distance from ports of international entry, outer island communities are generally less likely to be exposed to the virus; however, the impact could be catastrophic if a COVID-19 outbreak were to occur on an outer island. Three factors come into play: poor health among the population (e.g., a high incidence of non-communicable diseases acting to suppress immune systems and increase vulnerability to COVID-19), the higher proportion of elderly people on many outer islands, and severe limitations in the availability and quality of public health services. Poor connectivity often constrains the timely provision of medical supplies and personnel and increases the difficulty of transferring patients to better-equipped facilities on the main islands (or overseas1). In remote outer islands, there is also a high risk that COVID-19 infections could go undetected.

Weighing the COVID-19 pandemic’s dangers has raised broader awareness of the massive risks that new or re-emerging disease outbreaks will become more frequent and more severe, adding to the well-documented vulnerabilities to natural hazards and climate change. Over the past 12 months, Pacific countries have had to deal with outbreaks of dengue fever, a serious occurrence of measles (in Samoa), and the severe impacts of Tropical Cyclone Harold. Increasing resilience to climate change, natural disasters, and health-related emergencies – including ways that account for the specific circumstances of outer islands – will continue to grow in importance as a policy priority in the Pacific for the foreseeable future.

1 In the current COVID-19 situation, all overseas referrals have been suspended.
BOX 1

COVID-19 and the PICs (continued)

Economic impacts and implications

Although the public health impacts of the pandemic have so far been limited, PICs that rely on tourism, overseas employment, and remittances as sources of income have been particularly exposed to the COVID-19’s economic impacts. The range and magnitude of these economic impacts vary across the Pacific outer islands.

The outer islands where tourism is an important driver of local incomes and livelihoods have already been dramatic economic effects, including widespread job losses and business closures. The medium-term outlook for the region’s tourism is critically dependent on when international borders reopen and on how quickly after that tourists return. The tourism-dependent PICs have attempted to encourage local tourism as a substitute for international arrivals, but the stimulus provided by locals is relatively small, and domestic travel restrictions in some cases may have made it particularly difficult for outer island operators to benefit. Longer-term hysteresis effects – businesses closing down permanently, workers losing their jobs and not being able to regain employment, human capital effects associated with lost months of education and training, etc. – have the potential to lead to a substantial and potentially long-term loss of income and supply-side capacity, resulting in economic adjustments that last long beyond the resolution of the COVID-19 outbreak itself.

On the majority of outer islands, however, subsistence agriculture and fishing are the predominant sources of livelihoods, and these activities can act as buffers against the economic effects of COVID-19. But other sources of income and livelihoods are being strained. Remittances and transfers – both associated with informal social protection mechanisms – are important supplements to subsistence incomes for some outer island residents, but they are likely to be negatively affected by the global and domestic economic downturns. International labor mobility (including seasonal work programs) is usually an important outlet for excess labor in the Pacific, including from outer islands, but these opportunities will remain temporarily unavailable while travel restrictions are in place. Public services and public sector employment may hold up in the near term, but they are likely to face pressure over the longer-term if COVID-19 impacts persist and stretch public finances.

For several PIC governments, COVID-19 has highlighted the need to diversify away from tourism and increase self-sufficiency as a means of increasing economic resilience. The result has been an increased focus on agriculture. In Vanuatu, for instance, the government is aiming to meet a greater proportion of domestic consumption by boosting primary production (agriculture, fisheries, and forestry), including a strengthening the agriculture value chain and engaging in higher value-added activities. In the best case, such strategies could increase domestic demand for agricultural produce from outer islands and may be a catalyst for commercialization and the development of transport infrastructure linking outer islands with main islands. On the other hand, such strategies would ultimately be unsustainable if governments are tempted to support fundamentally unviable or unprofitable activities.

Anecdotal evidence suggests that Pacific workers – who may have lost work as a result of COVID-19 – are already migrating back to villages on outer islands to seek work on farms or return to subsistence activities. In Solomon islands, such migration was explicitly encouraged by government as the pandemic gathered momentum worldwide. Substantial inflows of unemployed workers, however, could potentially put significant pressure on subsistence livelihoods of current residents on outer islands. The extent of these pressures is likely to vary widely across PIC outer islands – depending inter alia on the number of migrants, the island’s agricultural “carrying capacity,” and the availability of required inputs.
**BOX 1**

**COVID-19 and the PICs (continued)**

**Implications for connectivity**

The pandemic has severely tested physical connectivity in the Pacific. Air- and sea-borne goods trade is being hampered by delays and additional logistical requirements, strengthening the case for import substitution. The loss of airline connections has made it difficult to import necessities quickly (including medical supplies) and send out medical samples for international testing. Pacific leaders have agreed to establish the Pacific Humanitarian Pathway on COVID-19 (PHP-C) to enable (via charter flight) the “provision of medical and humanitarian assistance from regional, international and development partners in a timely, safe, effective and equitable manner.” A significant risk remains that other key functions typically performed by international contractors will no longer be adequately carried out (e.g., servicing and maintenance of public infrastructure and specialized equipment). This experience may prompt attempts to bolster the local capacity to supply such services in the future.

The restrictions on physical movement associated with COVID-19 have also highlighted the potential of information and communication technology (ICT) as a means of connecting people and enabling service provision. In outer island communities, these technologies have the potential to improve the delivery of health, education, and business services, bolster connections with other communities, and provide government, businesses, and citizens with access to better information. Realizing this potential will require – among other things – further improvements in digital connectivity in the form of faster, cheaper, more reliable internet on outer islands.

**Implications for urban planning**

Inadequate land-use planning on main islands has in some cases resulted in areas with overcrowded living conditions, substandard housing, inadequate facilities, and limited access to clean water, sanitation, and adequate healthcare. Pacific governments often point to these urban ills to support efforts to discourage migration from outer islands to main islands. Poorly managed settlements, particularly in areas already vulnerable to natural disasters, can exacerbate risks associated with communicable diseases – if communities cannot practice adequate hygiene and physical distancing. In addition, disasters (especially floods) can increase the transmission of communicable and water-borne diseases, impacting vulnerable urban communities that already have limited resources and capacities to recover from disaster shocks.

This report recommends well-planned and well-managed investments in urban areas as a cost-effective strategy to provide improved living conditions to a higher proportion of the population. COVID-19 only serves to reinforce the importance of improved urban planning and development control, formal land administration systems, and particularly investments in improved access to basic urban services – all of which can help to curb the potential for disease outbreaks in urban areas and support improved health and safety outcomes. In an immediate emergency response period (whether it be the current COVID-19 crisis or a natural disaster), settlements can be provided with portable sinks for handwashing at key public spaces, such as bus stops and entrances to buildings and shops, and community-based programs can be tailored to cover health emergency preparedness. Over the longer-term, safety and resilience can be bolstered via the provision of basic utilities – access to clean water, flood-risk mitigation infrastructure, hand-washing stations, sanitation and waste-disposal infrastructure, and multi-functional open spaces that are useful for recreation, evacuation, and emergency services provision. Well-planned and well-managed urban settlements and public facilities can also enhance the capacity of municipal authorities to deliver basic services during a crisis.
The PICs are among the world’s smallest, most remote, and most dispersed economies. Figure 1 illustrates the PICs’ skewed combination of small size and extreme remoteness. They stand out not only globally but also in relation to the Caribbean countries and other island nations, which are also very small but much closer to larger markets. A new measure of population dispersion – dispersion-adjusted population sparsity (developed in this report) – shows that the PIC populations are also more dispersed than those of any other country (Figure 2).

This extreme geography has fundamental implications for the PICs’ socio-economic development, their economic structure and growth performance, the inclusiveness of development, and public service delivery. The implications of small size and remoteness from larger markets was the theme of the World Bank’s Pacific Possible study (2017). The present study focuses on geographic dispersion, which not only magnifies small size and remoteness but also generates additional challenges in terms of spatial equity, connectivity, migration, and public service delivery. In the following few pages, we briefly describe the main impacts of socio-economic implications of small size, economic remoteness, and dispersion, as summarized in Figure 3.

Small size implies a lack of economies of scale both in public and private production. Remoteness implies high transport costs that prevent the PICs from overcoming small size through specialization and trade. This results in a situation where sources of economic growth are limited to activities where scale economies and transport costs do not matter as much, or those that generate sufficiently high returns to overcome these limitations (Winters and Martin 2004). Among the economic activities that meet those criteria: (i) natural resource-related activities, such as tourism, fisheries, and logging; (ii) payments related to sovereignty – such as aid, internet domains, philatelic products, or company and ship registries and domiciliation; and (iii) incomes and remittances from access to overseas labor markets through permanent or temporary migration (World Bank 2017). Innovations with potential for overcoming some of
the constraints of small size and remoteness, especially connectivity through ICT, have yet to prove they can facilitate new economic activities and enhance productivity in the small island economy context.

The dispersion of the PICs’ population over many islands further reduces economic and population density and increases distance. Already small product and labor markets are further fragmented, and transport costs from main to outer islands add to the already high cost of transport to larger economies. Taken together, the constraints of small size, distance, and dispersion help explain the PICs’ poor long-term growth performance. While some PICs have seen temporarily higher growth due to either tourism or natural resource rents, annual per capita real economic growth for most PICs has been below 1 percent during the past two decades. Looking forward, baseline long-term growth projections suggest continued slow economic growth. *Pacific Possible* examined the PICs’ growth potential with economic opportunities fully exploited – for example, increased tourism from China, improvements to the mechanisms for granting fishing licenses, or increased access to overseas labor markets. The report shows that this could allow some PICs to double long-term per capita real income growth. While making the best of opportunities by adopting the right economic policies is critical for improved incomes, the study showed that achieving the East Asian economies’ long-term annual economic growth of 5 percent or more is probably out of reach for most PICs (Figure 4).

**Figure 1:** Smallness and remoteness set the PICs apart ...

![Graph showing average distance from market vs. population (log scale)](image1)

Notes: (i) x-axis in log scale; (ii) y-axis calculated as the average distance from other economies weighted by their GDP. Source: World Bank 2017.

**Figure 2:** ... as does the geographic dispersion of their populations

![Graph showing dispersion adjusted population sparsity](image2)

Note: Blue bars are PICs and values above 1 are truncated. See Figure 8. Source: Population data from national census statistics (PopGIS via SPC/World Bank subnational database); Authors’ analysis.
Remoteness and small and dispersed populations also impact public service delivery by imposing high unit costs, the result of such factors as expensive imported materials and fixed cost that must be carried by small populations. For example, the cost of building a road in Fiji has been estimated to be four times that of building a road in Australia (ADB 2016). In Solomon Islands, the cost of supervisory visits and outreach visits by rural health centers and clinics are 10 and 12 times higher in the provinces than in the capital Honiara. The cost of some public sector activities – for example, policy development or some regulatory functions – are largely independent of population size, implying significantly higher unit cost for small countries. As a result, PICs’ public sectors tend to be large in relation to the size of their economies, even though the range and quality of services delivered is often limited.

In addition to magnifying the impacts of remoteness and small size on economic growth and public service delivery, population dispersion also creates additional challenges. These relate to (a) public service delivery, (b) connectivity, (c) spatial equity, and (d) internal migration and urbanization. Dispersion adds to the cost of public service delivery, increases logistical,
administrative, and technical challenges in supplying these services in locations that are remote from main islands, and changes the dynamics of accountability mechanisms. Whether by sea, air, or ICT, PICs face a particular challenge in maintaining adequate connectivity of outer islands to main islands and the world beyond, especially in a context of an often large number of very remote islands with small populations. In most PICs, dispersion is also reflected in spatial inequality with respect to access to economic opportunities and public services. As this study shows, such spatial inequities raise a host of complex questions and tradeoffs that policymakers need to consider. Closely related to spatial inequality is the issue of internal migration and urbanization, with most PICs seeing a steady flow of internal migrants to main islands, which typically offer more economic, cultural, and social opportunities and better access to public services and private consumption goods.

Finally, remoteness, small size, and dispersion and their economic implications contribute to shaping the political economy arena where decisions on spatial economic policy are made. Resource rents and development assistance are for many PICs the main sources of foreign exchange and government revenue. Governments control the spatial distribution of these rents in the form of targeted subsidies and transfers, public investment, and public sector employment, and the representation of outer islands in the political arena plays an important role in how such decisions are made. In addition, there are broader issues of territorial governance, including the emergence of hybrid systems where executive, legislative, and traditional governance functions bleed into each other, and challenges of limited statehood in areas where the presence of government rarely goes beyond the provision of basic education and health services.
Attempts to address the issues of the region’s peculiar geography are reflected in the PICs’ National Development Plans (NDPs). Looking at nine of these documents provides a sampling of prevailing views on spatial development. Most countries include improving the livelihood of people on the outer islands in their NDPs. However, methods differ. Increasing incomes from agriculture, fishing, and industry are goals for most countries. This includes RMI’s coconut replanting plan; Tuvalu’s support for copra products, traditionally prepared foods, and fishing; FSM’s investment in the coconut oil industry; and PNG’s encouragement of coastal fisheries and aquaculture. RMI, Fiji, Solomon Islands, Vanuatu, and PNG propose providing more business and trade opportunities on outer islands and in rural areas. RMI, FSM, and Solomon Islands plan to offer new employment opportunities on their country’s outer islands. Only Kiribati and Vanuatu have considered tourism as a viable method to improve outer island/rural area income.

The nine countries’ NDPs address infrastructure and services, each with its own priorities and areas of emphasis. The smaller PICs give much attention to improving connections between outer islands, the whole country, and the world. In their NDPs, they each cover all three pillars of connectivity: maritime transportation, air service, and ICT networks. Approaches for improving interisland transportation include building and repairing outer island airstrips and docks, investing in new ships and equipment, continuing subsidies to uneconomical routes, and providing continuous and regular transportation schedules. Methods for improving ICT services include investments in new facilities, upgrades and maintenance on existing equipment, and making services accessible and affordable for all.

Six of the nine countries’ NDPs include responses to climate change threats to outer islanders. RMI will develop an early warning system that targets outer island communities. Tuvalu plans to provide financial and technical support to outer islands that are responding and adapting to climate change threats. Fiji has identified for relocation all vulnerable communities at risk from climate-related events, and it has adopted plans for protective measures, including constructing of sea walls, watershed management, and riverbank protection. FSM has plans for upgrading critical infrastructure for climate change resilience. Solomon Islands will rely on effective disaster risk management, response, and recovery. PNG will increase meteorological and tide-monitoring stations and multi-temporal remote satellite image coverage.

The NDPs frequently mention the issues raised by migration from outer islands/rural areas to capital cities and other economic hubs. On one hand, it places burdens on the supply of basic services in areas of in-migration – mentioned in the Kiribati NDP. On the other hand, it draws potential workers away from development of the outer islands/rural areas – mentioned in the Tuvalu NDP. Many of the nine PIC development plans include population goals for outer islands. For example, RMI set “stable outer island population” as a national target. Tuvalu’s goal is to “retain population in outer islands and create a more balanced age structure.” FSM designates copra price as social payment to encourage outer islanders to remain on their islands. Kiribati has also adopted a population strategy that intends to stem migration by improving access to economic and social infrastructure on the outer islands.
BOX 3

Outer Island Spotlight on: Ambae, Vanuatu – Living on an active volcano

Ambae island is approximately 165 miles (266 kilometers) north-northeast of Vanuatu’s capital city, Port Vila. It has a land area of 398 square kilometers (154 square miles) and a population of 10,858 in 2,482 households (2016 mini census). Although the island has no urban centers, the concentration of essential services and main economic infrastructure around Saratamata, East Ambae (where the Penama Provincial Government Headquarter is also located) provides a hub for economic and trading activities for the communities around the island. Major public infrastructure and services in the island include government administration, water supply systems, primary and secondary schools, the provincial hospital, postal services (through two post offices), and banking services through National Bank of Vanuatu branches at Saratamata and Nduindui. The island is served by two airstrips: Walaha Airport in the southwest and Longana Airport in the northeast. Redcliffe Airport in the south has not been operational for the past 12 years. Air Vanuatu has direct flights to Port Vila, Espiritu Santo Island, and Pentecost Island. There is also interisland ship traffic to and from Luganville on Santo Island and Port Vila.

Traditional subsistence agriculture satisfies food needs, while most villagers engage in small-scale cash crop production as well, often grown in large upland gardens (with good rainfall and safe from roving pigs). The local economy is largely non-monetary, with cash crop income being used primarily for school fees and sundry items like soap, salt, kerosene, etc. For about 80 percent of the households, the sale of fish, crops, and handicrafts is their main source of income, while only 20 percent draw salaries as their main source of income. Most formal employment on the island is teaching. Remittances from relatives employed in the towns of Santo or Port Vila also contribute cash to the local economy, with 6.3 percent of households reporting remittances as their main source of income.

Ambae has no permanent sources of surface water (rivers, streams, or lakes), and only 6 percent of households have access to a piped water supply; 88 percent of the households use rainwater from a well or tank as the main source of drinking water. Apart from volcano ashes that affected water sources, the island also experiences water scarcity during extended drought periods due to climate change. Only 2 percent of households use electricity from a grid as the main source of lighting; 78 percent of households use solar lamps. Almost all (98 percent) households use firewood/coconut shells as the main source of cooking energy.
Outer Island Spotlight on: Ambae, Vanuatu – Living on an active volcano (continued)

Ambae is the emergent portion of Manaro Voui, Vanuatu’s largest (most voluminous) volcano. It is one of the world’s most dangerous active volcanoes, with a recent history that includes eruptions in 1966, 2005, 2016, and 2017. Its last eruption was recorded in 2018, when the government proclaimed a state of emergency and called for an immediate evacuation of all Ambae residents to Maewo Island. People had mixed reactions when told to evacuate. A few left the island voluntarily, but most had to be persuaded and government undertook an extensive consultation exercise with the communities. Many inhabitants shed tears during the evacuation, concerned about their homes and properties and many feeling insecure about what the future might hold for them.

All Ambae’s inhabitants returned to the island, even though the government offered land for settlement on another island. They went home largely because of their connections to the island, cultural beliefs, and their willingness to accept the risk posed by a volcano that has always been part of their lives. In addition, the cost of relocating to a new settlement is high, especially for communities with very limited cash incomes and savings.


### Proportion of HH growing vegetables and cash crops

<table>
<thead>
<tr>
<th>Crop</th>
<th>Proportion of HH growing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Island cabbage</td>
<td>95%</td>
</tr>
<tr>
<td>mandioc</td>
<td>93%</td>
</tr>
<tr>
<td>banana</td>
<td>92%</td>
</tr>
<tr>
<td>kumala</td>
<td>78%</td>
</tr>
<tr>
<td>Island taro</td>
<td>75%</td>
</tr>
<tr>
<td>Paw</td>
<td>72%</td>
</tr>
<tr>
<td>Yam</td>
<td>65%</td>
</tr>
<tr>
<td>Fiji taro</td>
<td>65%</td>
</tr>
<tr>
<td>Kava</td>
<td>55%</td>
</tr>
<tr>
<td>Corn</td>
<td>49%</td>
</tr>
<tr>
<td>Coconut</td>
<td>41%</td>
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<tr>
<td>Sandelwood</td>
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<tr>
<td>Cocoa</td>
<td>28%</td>
</tr>
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<td>Netapoa</td>
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</tr>
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</table>

Proportion of HH growing vegetables and cash crops
In *Reshaping Economic Geography*, its World Development Report for 2009, the World Bank explored the complex interactions among geography and economic development at local, national, and international levels. The report identifies density, distance, and division (3-D) as three critical geographic dimensions that influence the spatial distribution of economic activity and differences in living standards. The three factors impact economic development through the ways they shape trade and specialization:

- Density has been closely intertwined with increasing spatial concentration of economic activity and wealth. The clustering of production fuels growth through economies of scale and agglomeration effects. Density is highest in urban areas where economic activity tends to cluster and much lower in rural areas where production tends to spread out.
- Distance from economic density is a major driver of spatial inequality in production and living standards because it reflects the costs of accessing markets and economic opportunities. Being nearer usually lowers the costs of moving people and goods, being farther away raises the costs of travel and transport.
- Division is a catchall for the obstacles that hinder the movement of people, capital, goods, and services to areas of higher density. The most prominent examples are the physical barriers and borders between nations. However, divisions are present even within nations, including cultural, linguistic, and ethnic splits.

In broadest terms, the 3-D framework sees production and prosperity concentrating, usually in urban areas, as development moves forward, with the difference in living standards between leading (economically dense) and lagging (less dense) regions first widening as leading regions grow faster and then converging as prosperity spills over to lagging regions, driven by a combination of market forces and government action.
The PICs’ extremes of small size and remoteness make them unique among countries, far different from large, land-based nations, but the 3-D framework’s spatial view of geography and economic development still applies – but with a twist. Before examining the PICs’ spatial development through the 3-D lens in the next section, we highlight some of the specifics of the PICs’ economic structure that need to be taken into account when applying the 3-D framework.

Government and international connectivity, rather than economies of scale and agglomeration in private sector activities, are the primary drivers of economic density in the PICs. The typical economic structure is characterized by various rents and development assistance being the main sources of foreign exchange – all accruing to governments. Remittances from overseas workers are another important source of foreign exchange for many countries; for example, amounting to about 40 percent of Tonga’s GDP. This leads to a dominance of public sector activities that tend to be centered on a capital that, with the exception of Solomon Islands, is located on the most populous island. In the PICs, higher population and concentration of economic activities go hand-in-hand. The capital typically hosts the countries’ main and often only international air and seaports, making it the hub for trade and commerce and adding to its central role in the economy. As the seat of government and related institutions, the capital and main island are ports of entry for economic rents from overseas.

The distribution of rents often represents the most important economic relationship between the capital and outer islands, eclipsing production, commerce, and trade. Outer islands have extremely limited scope to generate cash inflows by producing internationally or even domestically competitive tradeable goods and services. As a result, the distribution of rents through public sector investment, employment, and transfers as well as access to off-island employment opportunities are typically more important than market-based, private sector transactions. As a consequence, the public sector tends to dominate main island-outer island relationships. Governments play a central role in the acquisition of rents and their use and distribution – be it from the sale of fisheries licenses or from development assistance. The division of political power and influence between the capital city and the outer islands becomes a key driver for the distribution of rents in the form of subsidies for outer islands’ production, investment projects, and service delivery. Understanding the political economy of public expenditure decisions is central to understanding spatial development in the PICs.

Through typical multiplier effects, government spending and employment are often the main drivers of economic activity on main islands, creating demand for private sector activities, such as construction and retail trade. Compared to geographic contexts with less discontinuity, the physical separation of main islands from outer islands and the attendant high transport costs imply that multiplier effects are less likely to spread with much force beyond main islands. Remittances to outer islands from incomes earned on the main island are one of the few channels to extend multiplier effects beyond main islands.

Economic development being driven by rents rather than investments implies that the scope for harnessing growth impulses through scale economies and agglomeration effects is much less in small PICs than in larger countries. The advantages of greater population concentration on main islands are primarily related to the production of non-tradeable private and public goods and services; small scale and distance preclude international competitiveness in tradeable services. In PICs, most of these non-tradeable services are provided by the public sector, including education, health, infrastructure, and administrative services. Greater population density results in reduced unit cost for such services, many of which are only available on main islands because unit costs on outer islands would be prohibitive.

In the PICs, tourism is the main investment-based source of economic growth. International connectivity by air and sea and local tourism potential are key determinants for these activities’ locations. In many cases, this implies a concentration of tourism on main islands, which tend to
have the only international gateways by air or sea. Tourism activities on outer islands tend to be
much smaller in scale, although still important to some local economies as an additional source
of employment and income.

In the following sections, we take a look at the PIC’s internal economic geography through the
3-D lens, examining distance, density, and division. We also introduce the concepts of dispersion
and population sparsity, which combine distance and density in a way that is particularly relevant
to the descriptions of the PIC’s internal geography and its socio-economic implications.

**Distance and dispersion**

A mere glance at the map confirms that the Pacific’s island nations are remote in a global context
and their populations dispersed over hundreds of islands (Figure 5). Nauru is the only PIC with
its population on one island. For the 10 other PICs, the number of inhabited islands ranges from
four for Samoa to more than 300 for Solomon Islands. Papua New Guinea is in a category of its
own, with a large landmass on the island of New Guinea and more than 600 inhabited islands.

In most PICs, a significant share of the population lives away from the main islands. For Solomon
Islands and Vanuatu, the figure exceeds 70 percent (Figure 6). Even so, outer islands’ populations
are typically small, although they vary significantly across islands and countries. For example,
Tuvalu’s eight outer islands have populations ranging from 46 on Niulakita to 1,542 on Vaitupu,
compared to 5,436 on Funafuti, the main island (2012 census). Malaita, the most populous of the
Solomon Islands, has a population of 137,596, which even exceeds the population on the main
island of Guadalcanal, with its 93,613 inhabitants (2009 census.)

In addition to population disparities, each country incorporates enormous variations in the
remoteness of individual communities and the extent these communities are clustered or
dispersed. This study introduces new measures of population dispersion, which combine data
on distance and population density into a single indicator that reflects the population’s spatial
concentration/dispersion. Figure 7 shows the distribution of the PICs population by distance.
The horizontal axis measures distances and the vertical axis population shares. The columns

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**Figure 5: A sea of islands**

Figure 6: Population distribution between main island and other islands

Note: Main island is defined as the island with the PIC's capital. With the exception of Solomon Islands, this is also each PIC's most populous island
Source: Based on census data from Pacific National Statistical Offices.

show the share of the population living in local areas with remoteness measures within a particular distance interval (blue bars). The countries vary on local-area remoteness, but for all of them populations are more heavily concentrated in areas characterized by low levels of remoteness, with small shares of the population living in more remote parts of the country. This is not a feature of the remoteness index itself; it reflects people’s natural tendency to settle close to one another. The vertical orange lines mark country-level dispersion; i.e., the average distance between any person and any other person. FSM and Kiribati are the most dispersed, with an average distance of 700 kilometers, while the populations of Tuvalu, Tonga, and Fiji are less dispersed.

A complementary measure is dispersion adjusted population density. It takes into account a country’s overall population, reflecting the average number of people living across a given distance. For two countries with the same dispersion but different populations, individual (outer island) communities will be much smaller in the country with the smaller population. For example, Marshall Islands and Solomon Islands have roughly the same geographic dispersion, but Solomon Islands’ population is about 10 times larger. Dispersion adjusted population density is thus much smaller for Marshall Islands Solomon Islands. The economic cost of dispersion is likely to be much greater for smaller island communities, implying higher unit cost of connectivity and lower economies of scale in the production and delivery of goods and services, both private and public. Due to its relatively large population (around 900,000) and modest geographic dispersion, Fiji has the highest dispersion adjusted population density among the PICs – by far (Figure 8). At the other end of the spectrum, small populations and large geographic dispersion result in very low dispersion adjusted population density for Marshall Islands, Tuvalu, Kiribati, and FSM, suggesting higher economic costs of dispersion for these countries.

We estimated the geographical scale of population dispersion and dispersion-adjusted population sparsity for about 100 countries around the globe. The geographical scale of population dispersion ranges from a maximum of 3,600 kilometers in Russia to a minimum of 40 kilometers in Trinidad and Tobago. None of the PICs lies at the extremes, but dispersion is at the higher end of the distribution for FSM and Kiribati, while Fiji and Tonga are at the lower end. After accounting for population size, however, the PICs stand out as having extremely low levels of dispersion-adjusted population density and, equivalently, extremely high degrees of population sparsity.
Figure 7: Distribution of local-area remoteness and the geographical scale of dispersion

Source: Based on census data from Pacific National Statistical Offices.
The dispersion of PIC populations over many islands further diminishes an economic density already severely constrained by small populations. On a global map of economic density, the PICs would be barely visible because of their small populations, low per-capita incomes, and small GDPs. Estimates of the PICs' spatial distribution of GDP are scarce, although the economic and population structure of the PICs clearly point toward a pattern of higher economic density on the main islands. PNG's capital Port Moresby, with an estimated population of 365,000, is by far the largest PIC capital, followed by Fiji's capital Suva, with an estimated population of about 175,000 (Figure 9). The PICs' other capitals and towns have populations of about 70,000 or less. Within individual PICs and across PICs, however, there are significant differences in density across islands and areas. This can be illustrated by a few estimates of the share of GDP generated in the capitals or on main islands. In Kiribati, an estimated 73 percent of GDP is generated in urban areas, and Vanuatu's capital Port Vila accounts for about 65 percent of the country's GDP. From a regional perspective, urban areas in PNG (Port Moresby and Lae) and Fiji (Suva-Nausori and the Nadi-Lautoka corridors) likely have the highest economic densities in the Pacific.
Division

Throughout history, economic and social forces have led to greater density of economic activity, with people moving from more remote and less economically dense areas to less remote and more economically dense areas. In most PICs, this process has been going on in the form of rapid urbanization. However, the pace often depends on factors that facilitate or limit the movement of people, including ethnic and cultural differences and rules on land ownership. Few formal restrictions inhibit internal mobility in the PICs. However, the Melanesian countries’ large ethnic and linguistic diversity can act as a constraint. Micronesian (Palau, FSM, RMI, and Kiribati) and Polynesian countries (Samoa, Tonga, Tuvalu) typically have greater homogeneity, which facilitates movement toward main islands. Strong family links across islands facilitate internal mobility, and outer island communities often have community centers on main islands. In Kiribati, for example, each outer island has a community house (maneaba) on the main island of South Tarawa, providing temporary housing for visitors if they cannot find accommodations with relatives. FSM is a unique case among Micronesian countries; it is a federation of four states, each with its own language and culture, creating a certain degree of division within FSM. In most PICs, rules around traditional landownership can pose important constraints to mobility. Land is under traditional community ownership, which makes it difficult for internal migrants to acquire land. They often end up living in informal squatter settlements, with no security of tenure. In the past, these divisions have contributed to conflict between migrant communities and the established population.

Several outer islands have seen calls for greater independence or autonomy. Such calls for independence are usually grounded in grievances over the distribution of resource rents and neglect from the central government, which outweigh the cost of greater division. Recent examples include Bougainville in PNG, where the majority voted for independence in a non-binding referendum, and the state of Chuuk in FSM, where an independence referendum is scheduled for 2022.
Outer Island Spotlight on: Vava’u, Tonga – A world-class tourist destination

Vava’u is a cluster of islands in Tonga about 240 kilometers to the north of the Tonga’s main island of Tongatapu. It consists of a large island (Utu Vava’u) and 40 smaller ones. On a land area of 138 square kilometers, 13,738 inhabitants live in 2,715 households (census 2016). Neiafu, its administrative center and Tonga’s second-largest town, has a population of 3,722 and hosts government offices, banks, schools, a police station, a hospital, a deep-water harbor, and an international airport. The airport has limited international flight service, currently through Fiji Airways. Real Tonga operates all domestic air services in the country. Less frequent services connect Vava’u to Ha’apai, Niuafou, and Niuatoputapu. Flight times are 50 minutes to Tongatapu, 30 minutes to Ha’apai, and a little over an hour to both Niuatoputapu and Niuafou.

Vava’u is Tonga’s main tourism asset, with lush tropical landscapes, white-sand beaches, coral reefs, crystal clear blue waters, excellent sailing conditions, a popular yacht harbor, and a unique opportunity to swim with whales. However, tourism sector’s growth prospects are limited by significant challenges related to Vava’u’s remoteness and small size, including a limited supply of labor that makes it difficult for tourism sector operators to find and retain qualified staff, a small number of flights, and environmental fragility.

Tourism, agriculture, and fishing are the main sources of income on Vava’u. Based on 2016 census data, 79 percent of the households are in the agriculture sector, mostly for home consumption. On the island, 62 percent of households grow crops, 20 percent fish, and 57 percent raise livestock. Only 33 percent of households receive a regular salary as their main source of income, 30 percent sell products, and 22 percent rely on remittances.

Access to public services is better on Vava’u than on other outer islands. Piped water is the main source of drinking water for 10 percent of the households, while 69 percent use water tanks. Half of the households have toilets, 65 percent have kitchen facilities inside their dwellings, 56 percent use propane gas as the main source of cooking energy, 89 percent use the public power supply as the main source of lighting. Only very few households (8 percent) use solar power as the main source of lighting. A fifth of households have access to public waste disposal service, and 62 percent burn their waste. There is also better ICT connectivity on Vava’u than on other outer islands – 86 percent of households have cell phones, about a quarter have computers or laptops. Internet connection is still limited, covering only 9 percent of the household.
Turning to education, 92 percent of the population has attended school, matching the country average. The school attendance rate for children ages 3-18 is 96 percent. The literacy rate (have no or some difficulty read and write) in Tonga is 95 percent; the literacy rate (have no or some difficulty read and write) in English is around 70 percent.

Interisland movement and migration are also frequent on Vava’u. Of Vava’u’s 13,738 residents, only 11,722 (85 percent) were born on the island; 1,215 (9 percent) were born on Tongatapu, 489 in other districts, and 303 overseas and have returned. On the other hand, 6,039 people who were born on Vava’u have moved to other districts, most of them to Tongatapu (5,343 people). The result is a net out-migration of 4,326 people. One year migration data from 2015-2016 shows a similar trend. There was in-migration of 464 people and out-migration of 746 people. People who migrate out are mainly working-age males looking for better job opportunities on Tongatapu.

In this section, we take a closer look at living standards on the PICs’ outer islands. This includes sources of livelihoods and incomes, poverty, access to public services, household amenities, and connectivity services. We also discuss internal migration, an important facet of life in the PICs. The analysis draws primarily on census data, which provide the most detailed and reliable spatially disaggregated information, complemented by information from other sources, such as household income and expenditure surveys. We also compare indicators for outer islands to those of countries’ main islands to identify spatial inequalities in living standards. Figure 10 presents the indicators in four clusters to provide an overview of key elements of living standards on outer islands and differences to the main islands. The clusters comprise:

- Dependence of households on agriculture and fishing for their livelihoods.
- Access to education and literacy.
- Infrastructure services, such as electricity, water, and sanitation.
- Enhanced living standards through a range of household amenities.

For the majority of households on PIC outer islands, agriculture and fishing are the main sources of income, while households on main islands have a much greater access to incomes from employment and market-based activities. Differences between main and outer islands with respect to education are small. The gaps are much larger for such infrastructure services as water and electricity, with household access about twice as likely on main islands than on outer islands. Similar gaps can be observed for access to household amenities, such as radios, TVs, telephones, or internet services. In the following, we take a closer look at the data for livelihoods, incomes, and poverty, access to public services, infrastructure services, and household amenities.
Livelihoods, incomes, and poverty

The data generally suggest economic activity is more informal in remote communities. Wages and salaries are less likely to be a main source of income and engagement in home production is more widespread. This reflects the PICs’ economic structure. Most notably, governments are typically the largest employers, with most public sector entities concentrated on main islands. This is mirrored in more widespread participation in home production outside the main islands – mostly agriculture and fishing. When compared to main islands, the working-age population makes up a smaller share of the population on outer islands (Figure 11).

Sources of livelihoods

Wages, salaries, and business earnings are the most important contributors to main islands’ per capita incomes, accounting for an average of 60 percent in the PICs sampled (Figure 12). The figure falls to a third for outer islands. Subsistence production – or economic activity for own-consumption and limited sale – are the main activities on many outer islands, especially agriculture and fishing. This is consistent with the idea that more formal market activities are pinched on outer islands by geographic constraints, including tiny domestic markets, fewer complementary public services and infrastructure, and higher trade costs. Much of the formal sector activity that does exist on outer islands is public-sector employment, and these jobs appear to drive a significant proportion (but not all) of the variation in formal employment across islands.

Figure 10: Key elements of living standards, main and outer islands of the PICs

Figure 11: Sources of income and demographics on main and outer islands

Note: Indicators reflect responses to diverse questions across countries, and levels are normalized to range from the minimum observed (at the chart origin) across enumeration areas within a country to the maximum observed (at the chart edge). Charts display average for case-study PICs with available data.
Source: Based on census data from Pacific National Statistical Offices.
Climate change and natural disasters threaten the subsistence production that supports livelihoods on many outer islands. IPCC (2019) notes that low-lying islands and coasts are already experiencing the impacts of climate change, and these are projected to increase over the course of the 21st century: “Accelerating sea level rise will combine with storm surges, tides and waves to generate to extreme sea level events that affect flooding, shoreline changes and salinization of soils, groundwater and surface waters.” Changes in precipitation patterns are associated with more frequent droughts and flooding, further imperiling the subsistence basis of outer islands.

To sustain the economic base of outer islands, investments in seawalls, desalination plants, emergency shelters, and early warning systems become increasingly important to protecting water resources and arable land from sea level rise, king tides, and salination. World Bank (2017) estimates the cost of coastal protection, using a model that incorporates a simple cost-benefit test to ensure that investment in coastal protection only occurs when either population density or level of economic activity is high enough to justify the costs. The estimates vary significantly across countries and scenarios for sea-level rises, but the overall costs of protecting the PICs would be very high relative the size of their economies. For Kiribati, RMI, Solomon Islands, and Vanuatu, the estimated annual cost are more than 8 percent of GDP. It is important to note that these estimates would include no protection against sea level rise for most outer islands because their population densities and levels of economic activity are too low to yield a positive cost-benefit ratio. However, even the cost of protecting areas for which the investment is warranted would far exceed what PICs are able to afford.

Where the basics of life on outer islands cannot be protected, relocation of threatened populations will need to be considered; it is already happening in some PICs. World Bank (2017) notes that “progressive and planned relocation of the population away from the most exposed areas would be less costly and preferable to a last-minute abandonment, which would require a significant level of emergency assistance.” Climate change also interacts with other drivers of migration (IPCC 2019), implying the prospect of severe negative impacts of climate change will contribute to an acceleration of migration.

**Incomes**

Across the Pacific, available data from censuses and household surveys indicate average per capita incomes are consistently lower on outer islands than on main islands, although the difference varies across countries (Figure 13). Much of this can be explained by the previously
discussed differences in economic structure between main and outer islands. However, the income gaps do not simply reflect rural living’s disadvantages. Where main islands have both a capital city and a rural hinterland – notably, Solomon Islands, Tonga, and Fiji – there appears to be an additional reduction in incomes associated with just being on an outer island, over and above the reduction associated with living in a rural area. In the case of Vanuatu, average incomes are higher in the rural areas of Efate (the main island) than they are in the capital or the outer islands.

In addition to income from employment and subsistence production, outer islands’ residents receive money from remittances, gifts, and government transfers. The available data suggest these income streams make relatively small average contributions to household welfare – 10 percent or less of total income in all countries, except for Tonga and FSM. Just as important, remittances, gifts, and transfers are not systematically different on main and outer islands. By themselves, remittances contribute more to main island incomes than outer island incomes in Fiji and Tonga, but less in FSM, Solomon Islands, and Tuvalu. Apart from Tonga, the remittances are around or below 5 percent of total average incomes. On the other hand, gifts are generally higher on outer islands – with the exception of FSM. While gifts’ contribution to average incomes is generally minor, the poorest and most vulnerable on outer islands tend to benefit most, consistent with a poverty-alleviating role. Remittances and gifts are aspects of traditional systems of exchange and obligation, and they can be important in the response to deprivation affecting entire communities/outer islands as well as an important form of insurance, with evidence suggesting they increase in response to natural disasters.

Working-age cohorts are consistently smaller as a share of the population on outer islands than on main islands. Two factors probably account for this result: differences in reproductive behavior (i.e., number of children per woman) and migration (people leaving the island for education and work). The implication is that outer islands’ dependency ratios are higher – in most countries, it reflects a higher number of children per adult; in some, a higher number of older people per adult is also a factor. At the same time, the prevalence of disability tends to be higher on outer islands, possibly reflecting more limited migration opportunities and greater needs for family support. Surprisingly, it is more common for people on outer islands to be recent migrants – at least in Fiji, RMI, and Tonga, the three countries where information on households’ migration status is available. However, this does not imply net migration from main to outer islands. In most countries, the population on main islands is much larger than on outer islands, and migrants to outer islands likely include teachers, health workers, and other government employees on temporary postings.

Figure 13: Relative average annual per capita income in PIC outer islands

Source: Based on census data from Pacific National Statistical Offices.
Poverty and hardship

The data show clear differences in socio-economic indicators between main and outer islands. An important question is whether these differences are also reflected in higher incidence of poverty on outer islands. To answer this question, we examine subnational poverty estimates based on household income and expenditure surveys (HIES). The countries use the household data to construct food poverty lines (FPLs) and basic needs poverty lines (BNPLs); however, the results are not generally comparable across countries or even within countries. The first major limitation is that poverty analyses are relatively few and far between, with many countries having long gaps between data collections. For example, RMI has not had a poverty analysis in the past 15 years. There are also several technical issues stemming from inconsistency of data collection methods and poverty measurement methodologies - for example, subnational food baskets capturing different standards of living, procedures for adjusting for price differences from place to place, and geographical coverage.

A fundamental challenge for poverty measurement is the tradeoff in calculating poverty statistics that are relevant to a specific context and statistics that are comparable between contexts. In the Pacific, the most common disaggregation levels are province and urban/rural; the main island/outer island dichotomy has not been commonly used for poverty measurement. The best avenue for making cross-country comparisons with available estimates is to consider urban/rural poverty estimates according to the international poverty line (US$1.90 a day, PPP adjusted). These World Bank estimates, along with poverty at the national level measured against the international poverty line, are presented in Table 1, ordered from most recent to the oldest data. Small samples or very low poverty rates for some countries - namely Tonga, Samoa, Fiji, and FSM - reduce the scope for comparing these estimates.

Comparisons of urban and rural poverty can usefully be made for Vanuatu, PNG, and Tuvalu, where HIES reports were close in time and the estimates were spatially deflated. Comparisons are also possible for Kiribati, although the data is older. While urban poverty is estimated to be higher than rural poverty in Vanuatu, the opposite is true in PNG, and there is no difference in Tuvalu or Kiribati. For the Solomon Islands, the gap between urban and rural poverty is large - 4 percent compared to 30 percent, respectively - but spatial deflation draws into question the comparability of the estimates. The PICs have seen substantial interisland migration in search of

| Table 1: International poverty line estimates (%) for urban and rural populations |
|-------------------------------------|---------|---------|-----------------|----------------|-----------------|
| Country                      | HIES Year | Urban | Rural | Spatial Deflation | Internally Comparable | Externally Comparable |
| Tonga                        | 2015-16   | NA    | 1     | Deflation using three regional poverty lines | NA | Likely |
| Fiji                         | 2013-14   | 1     | 1     | Yes | Likely | Likely |
| FSM                          | 2013-14   | NA    | NA    | Missing values | NA | NA |
| Samoa                       | 2013      | 1     | 1     | Deflation using four regional poverty lines | Likely | Likely |
| Solomon Islands             | 2012-13   | 4     | 30    | No implicit price deflation | Unlikely | Unlikely |
| PNG                         | 2009-10   | 27    | 39    | Deflation using six regional poverty lines | Likely | Likely |
| Vanuatu                     | 2010      | 19    | 11    | Deflation using three regional poverty lines | Likely | Likely |
| Tuvalu                      | 2010      | 3     | 3     | Deflation using two regional poverty lines | Likely | Likely |
| Kiribati                    | 2006      | 13    | 13    | Deflation using three regional poverty lines | Likely | Likely |

Source: Author’s assessments of published HIES reports on poverty (all reports included in reference list).
economic opportunities and in response to climate change. While it seems likely that migration to urban areas on main islands would improve quality of life, this may not always be the case due to higher living costs and reduced access to subsistence farming and fisheries. Therefore, rural poverty is likely to be equal to or higher than urban poverty in most contexts, but it is possible that urban poverty is higher in some PICs.

For some PICs, small-area estimations of poverty are available on “poverty maps,” produced using a combination of census and HIES data. These maps can reveal pockets of poverty within relatively well-off divisions that would otherwise be masked by analysis at a higher level of aggregation. For example, the Solomon Islands poverty map reveals the country’s highest poverty rates are in the southern part of the Guadalcanal Island, while poverty rates around Honiara are lower. In Figure 14, this is represented with darker areas indicating higher poverty rates. Apart from demonstrating considerable heterogeneity in poverty rates across areas, however, overgeneralizing the results to make conclusions about urban/rural or main Island/outer Island poverty rates may be unhelpful. More generally, pockets of poverty exist in the most well-off regions in many countries. In Honiara, Suva, Port Vila, and many of the region’s other larger cities, some localities within urban areas experience higher rates of poverty amid the relatively low urban poverty rates.

In conclusion, differences between outer and main islands in average incomes and other socioeconomic indicators clearly do not directly translate into differences in the incidence of poverty. In addition, overall poverty incidence is relatively low for many PICs, with average incomes well above the international poverty line (e.g., Fiji and Samoa). In some cases, the degree of inequality on main and outer islands may have a greater impact on relative poverty rates than average incomes. If inequality is greater on the main island than on the outer islands, for instance, the main island’s poverty incidence may be higher even with higher average incomes. On some outer islands, the norm of diversified subsistence production may act as a buffer against falling into extreme hardship despite lower average incomes overall. However, the commonly held notion of “subsistence affluence” may be losing applicability over time due to the continued penetration of the cash economy into the outer islands, increased pressures on and expectations for service delivery, and greater vulnerability to natural disasters and climate change.
Public services

The dispersion of the PICs’ populations over a large number of very remote and small islands poses particular challenges for delivery of public services. This matters a great deal because access to basic health, education, public order and justice, water, sanitation, electricity, and transport services - and the quality of those services - is critical to Pacific Islanders’ human development and livelihoods. In addition to cost and quality, the outer island context introduces the PICs’ particular political economy dynamics into public services delivery, introducing additional dimensions to the challenges.

At the core of the challenges is the limited ability to take advantage of economies of scale and higher transport costs, which combined to make public services delivery disproportionately expensive on a per capita basis. This tends to matter more for some public services than for others, depending on the scale typically needed to provide such services efficiently. For example, providing complex clinical care on a permanent basis is typically disproportionately costly because the capacity to provide the services needs to be sustained even if few patients need them – so facilities and services often go underutilized. In contrast, the entire population requires primary health care on a fairly regular basis, so the feeder populations for individual local clinics may be similar in size on a main island and a less-populated island – therefore, being an outer island does not impose disproportionate cost. In many outer islands, the population may be too small for a secondary school to use teachers and classrooms efficiently; in some outer islands, it may be too small for primary schools. If these schools are provided anyway, costs are likely to be disproportionately high and/or the quality of the services is likely to be adversely affected. In health, policing and justice, electricity, sanitation, and transport, outer island populations may not be large enough to make even very basic services viable at reasonable cost, leaving governments facing very difficult choices about the minimum level of services that will be offered on outer islands irrespective of the cost.

Basic human development

All PICs seek to provide education and health services to their citizens, independent of where they live. This is reflected in census data, which show similar levels of primary and secondary school enrollment for children from outer and main islands. However, these average numbers mask some variation among individual countries. Access to secondary education appears lower on outer islands than on main islands in FSM and Kiribati but higher in Tuvalu. In RMI, overall school enrollment rates are higher outside the main island; for Tonga, by contrast, there is no systematic difference in the share of children attending school on main and outer islands. Literacy rates are also only moderately lower on outer islands than on main islands (Figure 15).

Figure 15: Education and literacy on main and outer islands

Note: Indicators reflect responses to diverse questions across countries, and levels are normalized to range from the minimum observed (at the chart origin) across enumeration areas within a country to the maximum observed (at the chart edge). Charts display average for case-study PICs with available data. Details of countries and indicators included can be found in the main report.
Source: Based on census data from Pacific National Statistical Offices.
These data point to some of the PIC governments’ successes in making basic education available for all. However, average levels of formal educational attainment are significantly lower on outer islands than on main islands. This is largely the result of the migration of many better-educated people from outer to main islands or overseas, although it may also reflect to some extent more limited access of outer islands’ older generations to educational opportunities.

An important question is whether there are systematic differences in the quality of education and other public services between outer and main islands. Census data on school access contain no information on potential differences in educational quality. Few PICs make the detailed results of standardized achievement tests public. Marshall Islands is one that does. Results show the country’s schools have significantly lower student achievement on outer islands than on main islands (Figure 16). However, the data also shows significant variation across outer islands (Figure 17). Anecdotal information from other PICs suggests that students on outer islands in some cases perform better than those on main islands. While schools on outer islands may have more limited resources, community and household participation may in some cases offset these shortcomings. This can be in the form of communities and households providing more support and control to students and teachers (e.g., explaining better learning outcomes for primary students on Tuvalu’s outer islands); or island norms that place a heavy emphasis on education as a means to escape hardship (e.g., in the Southern Gilbert Islands in Kiribati).

Figure 16: Main versus outer island results of the Marshall Islands Standards Achievement Test, 2013

![Main versus outer island results of the Marshall Islands Standards Achievement Test, 2013](image)

Note: The percentages are the percent of student scores above proficiency levels on the tests. Source: Ministry of Education – RMI (2014).

Figure 17: Range of outer islands results of the Marshall Islands Standards Achievement Test, public schools, 2013

![Range of outer islands results of the Marshall Islands Standards Achievement Test, public schools, 2013](image)

Note: The percentages are the percent of student scores at or above proficiency levels on the tests (combined). Source: Compiled from Ministry of Education, RMI (2014).
Infrastructure services

A range of infrastructure services – especially access to electricity, water, and sanitation – are essential elements of the quality of life and part of the Sustainable Development Goals. Census data show that access to these infrastructure services is very limited on outer islands compared to access on main island (Figure 18). These differences reflect policy decisions based on the affordability and economic benefits of extending infrastructure services on outer islands, with their small populations, limited economic activities, and high cost of infrastructure investment. The per capita net benefits of infrastructure investment are typically much higher for main islands than outer islands – especially if populations on outer islands are very small.

Household amenities

Households on outer islands tend to have limited access to amenities, such as TVs, radios, telephones, and internet access (Figure 19). Once again, differences with main islands are large, especially with regard to TVs and internet. Radios are more widespread on outer islands, making the gap with main islands smaller. The differences in amenities between main and outer islands partly reflect lower cash incomes on outer islands, limiting affordability. Another factor is limited reach of TV, radio, telephone, and internet networks, which do not reach many outer islands. With respect to the internet, it is important to note that access is rapidly increasing on main islands and, as we will discuss in a later section, efforts to extend internet access to outer islands are underway.

Figure 18: Infrastructure services (water, sanitation, electricity) on main and outer islands

Note: Indicators reflect responses to diverse questions across countries, and levels are normalized to range from the minimum observed (at the chart origin) across enumeration areas within a country to the maximum observed (at the chart edge). Charts display average for case-study PICs with available data. Details of countries and indicators included can be found in the main report.
Source: Based on census data from Pacific National Statistical Offices.

Figure 19: Household amenities (ICT, transport) on main and outer islands

Note: Indicators reflect responses to diverse questions across countries, and levels are normalized to range from the minimum observed (at the chart origin) across enumeration areas within a country to the maximum observed (at the chart edge). Charts display average for case-study PICs with available data. Details of countries and indicators included can be found in the main report.
Source: Based on census data from Pacific National Statistical Offices.
Census data indicate outer islands’ lower living standards extend to housing and transport. In some countries, more remote islands generally see greater use of traditional construction materials in housing. In addition, levels of asset ownership are lower – e.g., private means of motorized transportation. With regard to transport, motor vehicle ownership is higher on main islands, and (motor) boat ownership is typically higher on other islands. The low levels of private vehicle ownership on outer islands reflect not only affordability but also the very limited road networks. When islands are small, it reduces the need for motor vehicles. Motorized boats are often an important alternative, both as a means for transport on islands with limited road infrastructure (e.g., Solomon Islands) and for transport between islands in relatively close proximity (e.g., islands on atolls.)

Homeownership tends to be higher on outer islands than on main islands. The main islands are almost by definition more urbanized, increasing the share of households that rent. The only exception is Kiribati, where rental from private landlords is low in all locations, compensated to some extent by housing provided by government and local councils.

**Linkages between standards of living on main and outer islands**

An important question is the extent to which improvements in socio-economic development on main and outer islands move in parallel. Census data show the magnitude of the socio-economic development gap between main and other islands varies across countries and across indicators. This is consistent with the region’s diverse geography, but it may in some cases indicate an important role for policy interventions to support well-being for the populations on outer islands. For a few indicators, such as road-vehicle ownership and use of gas or electricity for cooking, outer island access is minimal across virtually all countries, independent of the situation on main islands. For other indicators, such as the share of children enrolled in secondary education or literacy, the gap between main and outer islands tends to be very small for all countries. For still other indicators – such as the main source of income, access to wage/salary employment, or access to electricity – there is significant variation in outer islands’ situations across countries. The differences between main and outer islands are less stark for RMI, Tonga, and Tuvalu for at least a few socio-economic indicators, especially with respect to access to safe water and electricity. With respect to electricity, this reflects these countries’ focus on renewable (solar) energy sources, which tend to be cost-efficient options for remote islands with small populations.

**Connectivity of the outer islands**

Connectivity by sea, air, and ICT is central to economic activity and quality of life on outer islands. With production on these islands typically limited to subsistence agriculture and fishing, most goods have to be brought in from main islands, where overseas imports land. Outer islands’ exports are very limited – copra for many islands as well as typically small quantities of fish and other agricultural products. Connectivity also facilitates the “reach of the state” to all islands, ensuring access to public services; enables internal and international migration while allowing migrants to maintain stronger links to their places of origin; and contributes to preparedness, early warnings, and recovery efforts in a part of the world with high exposure to rapid-onset natural hazards, such as tropical cyclones, tsunamis, volcanic eruptions, and earthquakes.

An effective interisland transport system should be able to provide outer island residents with accessible, reliable, and consistent transportation services at an affordable price. This entails maritime, airline, and ICT connections that are:

- Appropriate in capacity relative to passenger and freight demand.
- Efficient and frequent per unit time – per day, week, month, or year as appropriate.
• Reliable, regular, and punctual – i.e., small variations in times between successive arrivals of boats and aircraft and little variation from scheduled arrival and departure times.
• Affordable, both in money terms and taking into account the opportunity cost of travel time (this may depend on the income-generation potential).
• Safe.

Whether it is people or goods, small volumes and large distances translate into the high transport costs that constrain economic activity on most outer islands, including exports of such products as fish, copra, kava, or vanilla and the development of tourist destinations. Due to small and irregular transport volumes and long distances, many sea and air routes are not commercially sustainable. Outer island residents living along the unprofitable routes are generally underserved, with limited access to essential supplies, education, healthcare, and employment opportunities.

A rough scale of the imbalance in maritime transport is shown in the gaps between capacity as represented by vessels in use and the potential demand as represented by the number maritime ports (Figure 20, top). In a region where voyages between islands sometimes take days, for example, FSM deploys only two certified interisland vessels for 40 ports and Kiribati two vessels for 37 ports. For air transport, the gaps between capacity are represented by domestic air fleets contrasted with the potential demand as represented by the number of airports (Figure 20, bottom). Only four planes serve 41 airports in Solomon Islands; just three serve RMI’s 30 airports. For both sea and air services, the PIC countries vary greatly in this rough measure of transportation systems’ adequacy, with the gaps larger in countries with more remote and dispersed outer islands.

Figure 20: Sea and air transportation – capacity and potential demand

[Bar charts showing interisland sea transportation and domestic air transportation]
Most PICs support domestic interisland shipping and airline services, particularly along routes that are not otherwise commercially viable. Government ministries provide shipping services in Tuvalu and FSM; subsidized state-owned enterprises operate in RMI, Kiribati, Tonga, and Samoa. Government shipping services provided by ministries or by state-owned enterprises are often inefficient. Fiji, Solomon Islands, and Vanuatu rely on fully privatized franchise shipping schemes, with qualified private transport providers competitively bidding for performance-based and monitored contracts for government subsidies on uneconomical routes. These arrangements have proven more cost-efficient than government-operated shipping programs. As with maritime transport, governments typically subsidize air service. State-owned airlines dominate domestic air routes, with limited private sector involvement. The 11 PICs operate around 166 airports, all of them managed by government ministries, provincial governments, or state-owned enterprises. Primary airports are paved and can handle sizeable international aircraft. By contrast, secondary airports serve outer islands, and their unpaved landing strips can only handle small domestic aircraft that seat only a few passengers. Domestic aircraft usually must carry a full tank of fuel because most secondary airports do not have refueling capabilities, further limiting their passenger and cargo carrying capacity. Air schedules for tourism destinations are typically more frequent, but more remote outer islands typically do not have regular flights. Although aircraft charter services are available in most countries, cost makes them unaffordable for most outer island residents.

In addition to the capacity constraints of too few vessels, two other shortcomings define the maritime infrastructure on outer islands – inefficient ports and inadequate maintenance. Most outer islands do not have any infrastructure for vessels to berth. The boats anchor offshore and transfer passengers and cargo using smaller boats, a time-consuming and risky process prone to the vagaries of weather and waves. The outer islands’ port facilities could be upgraded, but small passenger and cargo volumes usually do not justify the cost of investment. What’s more, maritime services often rely on old second-hand vessels that are poorly maintained and not designed for the purposes they are being used. The problem is made worse by insufficient maintenance facilities and replacement parts for interisland vessels. When a ship breaks down, repair and return to service can take a long time, causing lengthy delays that disrupt outer islands’ shipping services.

ICT differs from maritime and air service in that capacity constraints are not binding and offers a greater potential for involving the private sector. Except for Tuvalu, all main islands are already connected to international submarine cable systems, or soon will be. Outer Islands are mostly connected through satellite technology. Two main competitors are offering high-throughput service to the Pacific: SES and Kacific. Both are building new generations of satellites to be launched within five years. With their multiple beams, the SES and Kacific satellites will be able to serve the whole area of PNG, Solomon Islands, Vanuatu, Fiji, Tonga, Cook Islands, Samoa, American Samoa, Kiribati, Niue, Tuvalu, Wallis and Futuna, New Zealand, and East Timor (as well as other Asian countries), and almost the whole area of French Polynesia and FSM as well as Christmas Island, Torres Strait Islands (Australia), and Loyalty Islands Province (New Caledonia). Available options for bringing ICT services to outer islands involve tradeoffs between cost, capacity, and reliability. Connectivity by fiber-optic cable tends to have higher reliability than satellite services, but typically it comes at significantly higher (fixed) cost. The value of the enhanced reliability and redundancy of cable connections will need to be weighed against economic losses from disruptions.

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2 The capacity of existing submarine cable links is generally higher than the estimated demand of these small Pacific Islands – this is simply a feature of the technology.
Migration and urbanization

Migration, both within the PICs and to overseas destinations, is a fundamental facet of life in the PICs. It allows people to access a wider range of opportunities and helps overcome the economic constraints arising from the PICs’ geography. The extent of migration from outer to main islands during recent decades is striking. High rates of urban in-migration have been observed since the 1960s and 1970s; over the past three decades, urban growth rates have far exceeded national population growth rates in all PICs except FSM and Samoa (Figure 21). The corollary to this is that the populations of remote areas and outer islands have been growing more slowly. In fact, populations are declining on some outer islands.

PIC internal migration is associated with movement to areas with higher incomes and greater employment opportunities. A comparison of migration rates and incomes across islands and regions in Fiji, Tonga, Tuvalu, Kiribati, Solomon Islands, and Vanuatu shows that migrants move away from islands and regions where incomes are lowest and toward islands and regions where incomes are highest. The story is more complex, of course. Comparing incomes or economic/material well-being across rural and urban areas is a challenge in the region, given widespread reliance on subsistence agriculture and fishing in rural localities. Nonetheless, the pattern of movement is clear enough – migrants move away from areas with minimal cash-based employment or income-earning opportunities and toward areas where the cash economy is more developed and these opportunities are more abundant.

Migrants also move to islands that are less remote. We compare migration to the remoteness index developed as part of this study, which is based on the population-weighted distance of an island/locality to all other islands/localities in the country (Figure 22). Population data over time for localities in Fiji, Tonga, Tuvalu, Kiribati, RMI, Solomon Islands, and Vanuatu is used to infer migration over a 10-year period. Not surprisingly, the data shows that migrants move away from more remote localities toward less remote localities. This is logical given what we know about incomes, opportunities, and service delivery in remote localities, where households typically subsist (largely) outside of the cash-based economy. Climate change is likely to contribute to push factors for migration from outer islands as rising sea levels and more frequent and intense natural disasters adversely impact agriculture and fishing, which constitute the main sources of livelihoods for outer island populations.

Internal and international migration are closely intertwined in the PICs. Permanent and temporary overseas migration and related remittance flows play an important role, generating benefits for the labor-sending and labor-receiving countries as well as the migrants and their families and
communities. International migration can directly originate from outer islands, but in many cases it takes place in two steps. In the first step, the prospective international migrant from an outer island moves to a main island, which provides better opportunities to prepare for migration, both in terms of skills development and the process for applying to permanent, temporary, and seasonal migration schemes. The second step is then the actual migration overseas, although in many cases such opportunities may not materialize, or the outer island migrant may find satisfactory opportunities on the main island and abandon the pursuit of overseas migration.

Rural-urban migration occurs in most developing countries – so the Pacific’s migration patterns are not unusual. It is primarily those of working age who leave villages in search of jobs or income-earning opportunities in places with greater economic activity. The elderly and those not yet of working age are usually left behind, although they are generally supported by family members who do migrate. For households, the net effect of such migration is typically higher incomes and better economic/material wellbeing. Support networks and information play important roles in determining the extent of migration. These connections play a similar role for internal migration and the overseas diaspora of migrants moving to other countries. The larger the diaspora, the greater the support networks and information available to migrants, both of which increase incentives to move. In a domestic context, large family/kinship networks on a main island or an urban center provide support to facilitate internal migration. A high stock of internal migrants will encourage a greater flow of migrants – at least up to a point. The ability to return to origin islands is also a factor in risk calculations; the less remote an outer island, the more likely a significant and regular (circular) migration between it and the main island.

To explore the implications of migration on the demographics of outer islands, we made 40-year projections of the effects of internal migration on population levels for seven PICs – RMI, Tonga, Vanuatu, Fiji, Kiribati, Tuvalu, and Solomon Islands. The projections are extensions of historical trends, with the assumption that past and present migration between islands will continue into the future. For each country, we compare the populations of regions, provinces, and islands under two scenarios – without migration and with migration. The chapter on migration includes projections for all seven PICs, but the results for Kiribati and Tuvalu provide a good sample of likely migration trends through 2055 (Figure 23). Kiribati’s population is projected to increase by 66 percent and exceed 180,000 in 2055. The population of South Tarawa, the main island, will rise to about 123,000, up 118 percent. The added population will challenge an island already facing a critical under-investment in basic infrastructure services in existing villages and areas available for urban expansion. Over the same time, the population of all Kiribati’s outer islands is projected to increase by just 11 percent, reaching nearly 60,000. Turning to Tuvalu, total population is projected to grow by 38 percent to about 15,000 in 2052. The population of
Funafuti, the main island, will be more than 12,000, an increase by almost 100 percent. Over the same time, the population of all outer islands is projected to decline by 44 percent to 2,600. Rural-to-urban migrants are often of child-bearing age, fueling a natural growth that accounts for 40 percent of population increases in cities. Migration and natural growth rates of urban areas will both remain important aspects of development trajectories in PICs.

Internal migration will on average lead to higher incomes and improved economic wellbeing for the migrant households as well as improved access to services necessary for building human capital, including education and health care. Despite the gains, internal migration is frequently viewed negatively in the Pacific. Perceptions of poor-quality settlements, unregulated development, congestion, overcrowded living conditions on main island and adverse economic and social consequences for outer islands have in some places led to national policies that try to stop (or even reverse) urbanization.

However, these perceived negative characteristics are the symptoms of underlying causes, including limited (or absent) urban policies and management systems, lack of forward planning for growth, and insufficient investment in basic services. Another symptom is an increasing concentration of people and assets on marginalized and hazard-prone areas, such as floodplains, steep areas subject to landslides, and coastal areas exposed to tsunamis and inundation. In South Tarawa, the growth rates of villages exposed to coastal flooding range from 3.6 percent to 10.4 percent a year. In Honiara, the area of informal settlements in floodplains grew from five hectares in 1984 to 131 hectares in 2010. In 2015, Cyclone Pam caused widespread damage on Efate island, destroying 10 percent of housing within the Port Vila municipal area and 23 percent in nearby informal settlements in peri-urban areas. However, the residents of the informal settlements are not transients – people have lived in many of them for a long time. Household survey data in informal settlements in Greater Port Vila, Vanuatu, and South Tarawa, Kiribati.

Figure 23: Kiribati and Tuvalu population projections
indicate that a significant portion of people were either born, or have lived most of their lives, in the urban and peri-urban informal areas. For example, 89 percent of the households in Ohlen Mataso and 73 percent in Anamburu – both in Greater Port Vila – stated they were born there or came with families as a child.

BOX 5

Outer Island Spotlight on: Abemama, Kiribati – Income support through copra subsidies

Abemama is one of Kiribati’s 32 atolls with a population of 3,262 in 602 households (census 2015) and a land area of 27 square kilometers. It consists of three islets that surround a deep lagoon. The largest islet is home to 11 villages connected by causeways extending over about 20 kilometers.

Abemama’s government center includes an administration building, the police station, and a hospital. The island has four primary schools, one junior secondary school, and two senior or high schools. An airstrip and a port connect Abemama to South Tarawa, Kiribati’s main island. The outlying islands of Abatiku with a population of about 154 and Bilike with a population of 6 can only be reached by boat. Abatiku hosts a primary school, small clinic, and two compounds for Roman Catholics and Kiribati Protestant Church denominations.

People tend to be more highly educated in Abemama than in Kiribati as a whole. On the outer island, 94 percent of adults (over 15) are literate in Kiribati; 37 percent have senior secondary certificates; 35 percent have primary leaving certificates; 17 percent have Form 3 certificates; and only 7 percent have not attended school at all.

For most households, agriculture and fishing are the main sources of livelihood. Almost every household owns coconut trees, and Abemama’s copra production is among the highest for Kiribati’s outer islands. The island is one of the main beneficiaries of the increase in the subsidized copra price from AUD0.5/kilogram to AUD2/kilogram. Of the 602 households, 449 fish regularly, mainly for their own consumption.

Household ownership of consumption goods

<table>
<thead>
<tr>
<th>Consumption Good</th>
<th>Ownership Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electricity generator</td>
<td>19%</td>
</tr>
<tr>
<td>Washing machine</td>
<td>7%</td>
</tr>
<tr>
<td>Fridge/deep freezer</td>
<td>4%</td>
</tr>
<tr>
<td>Car</td>
<td>2%</td>
</tr>
<tr>
<td>Motor bike</td>
<td>38%</td>
</tr>
<tr>
<td>Bicycle</td>
<td>42%</td>
</tr>
<tr>
<td>Radio</td>
<td>38%</td>
</tr>
<tr>
<td>Video</td>
<td>16%</td>
</tr>
<tr>
<td>Mobile phone</td>
<td>2%</td>
</tr>
<tr>
<td>Telephone landline</td>
<td>1%</td>
</tr>
<tr>
<td>Internet connection</td>
<td>3%</td>
</tr>
<tr>
<td>Computer</td>
<td>10%</td>
</tr>
</tbody>
</table>
Household amenities are very limited. Most households use solar energy for lighting, and firewood and coconut husks are used for cooking. Ground- and rainwater are the only available water sources for households.

Interisland movement and migration are commonplace. Of Abemama’s 2,967 residents age 10 and older in 2015, only 1,708 lived on the island in 2010, while 979 were on South Tarawa, 318 on Kiribati’s other outer islands, and 44 overseas and since returned. On the other hand, 615 people have moved from Abemama to South Tarawa since 2005, and 253 others went to other outer islands.\(^1\) Out of the 602 households, 34 had a member migrate overseas in the three years prior to the census. Data on place of birth shows a similar picture. Among Abemama’s population of 3,262, only 1,444 were born on Abemama, with 945 on South Tarawa, 786 on other islands of Abemama, and 87 overseas.

An island officer from the Ministry of Internal Affairs is the island’s main link to the central government. The appropriate sector ministries directly oversee the staffs of the schools and health clinics. Local governance is a village council, with elected representatives and the island officer as secretary. Traditional governance in the form of a council of elders also plays an important role in the island’s affairs, with overlapping membership and plenty of informal relations with the village council. The island is also represented by two MPs in Kiribati’s 45-member Parliament.


\(^1\) Data on people having moved overseas are not available.
Before discussing policy options and tradeoffs in addressing the PICs’ spatial economic development challenges, we examine some of the political economy and institutional settings that shape the policy arena in which spatial economic development decisions are made. Unfortunately, the settings in some cases add to the challenges created by the geographic dispersion of the PICs’ populations over vast swaths of ocean.

The political power of outer islands in centralised ‘theatres of power’

The outer islands live in the shadow of strong centralizing forces, with archipelagoes’ disproportionately large capital cities becoming crucial sites for outer islands’ pursuit of political and economic opportunities. But in a powerful paradox, outer islands can exercise disproportionate power in allocation of money and resources – despite their apparent disadvantages and depending on some crucial factors, including greater political representation per capita. Important development decisions about allocating infrastructure and services are caught up in these central-peripheral political dynamics, making governments’ rational, responsive allocation of resources very challenging.

In the Pacific island region as in archipelagoes everywhere, capital cities exert immense power – it is called “urban primacy” – as highly privileged sites where major infrastructure is established and where decisions on the spatial allocations of public resources are made. In recent years, rents from resources (fisheries, forestry), aid, and strategic geopolitical location have risen in many PICs. These rents are allocated by small numbers of people in central locations. They have strong incentives to use this allocative power selectively to build political coalitions from fragmented groups of local representatives.
Central to political offices within governments (such as minister status) become lucrative and important, but officeholding is simply the first step. Success typically depends on very particular and personalized party allegiances and access to commercial interests seeking political favor. MPs from everywhere gravitate to and often live in the capitals, especially if their constituencies are very remote, becoming part of cliques, associations, and important patron-client relations, with the loyalties and opportunities they offer. The capital offers a series of well-known sites – often hotels but also residences, clubs, and restaurants – where, quite simply, the deals get done and the resources are allocated. It is this “theatre of power” that outer islands must access and contest. Success in this contest is likely to be disproportionately rewarded, and failure will have significant impacts, too. But even winning the rewards is no guarantee of sustained outer island development.

Outer Islands can exert disproportionate leverage and power in these capital city contests. How do they reap the rewards of the capital’s politics? Part of the answer is that people living on outer islands are beneficiaries of an outer island/rural gerrymander: the disproportionate allocation of representation to smaller, more rural locations. In the PICs, urban electorates are much larger than rural or outer island ones, meaning tiny atoll populations may be as well represented as entire urban areas (Figure 24). Where outer island MPs are able to secure important cabinet and other posts, vastly disproportionate resourcing can flow to particular locales and projects.

Evidence also suggests that outer islands MPs are not significantly disadvantaged in contesting national politics, either to secure resources or seek higher offices themselves. The outer islands can offer able politicians a secure, even impregnable electoral base from which to engage in national politics. If the politician can consolidate support across local groups, electoral turnover can be limited and a political “fiefdom” can emerge, with long-term opportunities to be a key player. Many powerful Pacific leaders continue to emerge from remote locations.

This disproportionate representational and political power tilts political decisions in favor of the outer islands and greater equity, often at the expense of overall national welfare. Outer island and rural MPs are usually complicit in urging remote development priorities over urban ones, even when it is clear that urban development and agglomeration will deliver best outcomes based on criteria like efficient delivery of services. Outer islands’ MPs also have strong incentives to overpromote remote locations as legitimate sites of local development, representing them as potential “economic hubs” with strong infrastructure links to the capital and as underdeveloped yet possibility-rich economies capable of keeping would-be migrants productive in their home locations. In reality, such development is unlikely. Even moderate success depends not on such

![Figure 24: Share of MPs representing the capital vs. population of the capital](image)

Source: Boer Xia, World Bank research February 2019.
visions or on episodic infrastructure investments but on a realistic assessment of feasibility and economic viability in light of the many constraints faced by economic opportunities on the outer islands and tradeoffs with investments in locations with higher economic potential and fewer constraints. Achieving this requires sustained and well-institutionalized collective action, something difficult to attain in island archipelagic government.

**Challenges in creating stable government and enabling representatives’ collective action**

When MPs from many dispersed locations come together at the national level, they face particular incentives, opportunities, and challenges to working together, with common interests helping them take “collective action.” Some Pacific states have strong central governments and stable parties, which set out to powerfully extend the reach of political dominance and government services to remote locations. Where political parties and central state functioning are not strong or are highly fluid and unstable, however, dispersion means more personalized allocation of resources by and to MPs can become the crucial factor in government. In some Pacific archipelagos, national parliaments become convocations of personalized leaders and small, unstable parties, a phenomenon described as “small fish swimming in the shape of a shark.” These leaders are brought together not by political parties of policy but by the need to cooperate to form governments to access rents and become a part of patronage relations. Outer islands’ MPs are already small fish, and many are especially motivated to join the shark.

In many Pacific archipelago contexts, these governments are highly vulnerable to confidence votes, coalition breakdowns, and repeated cycles of short-term allegiances and allocations of power and rents. Cycles of this kind over decades can be ruinous, especially if MPs spend their terms amassing personal wealth though this process. In remote and outer island contexts, this behavior can deepen patronage and electoral conflict; at the national level, such leaders can become footloose, unpredictable figures within divisive political contexts, contributing to wider political instability. Both local and national governance can become weak, unstable, fragmented, and predatory. Adding further rents intensifies this fragmenting competition. Instability means politicians seek to extract as much advantage as they can in the short term, enabling them to deliver services and projects directly, often at their effective discretion through regular constituency development funds. Patronage and cliental relations of this kind typically do not deliver high quality investments in infrastructure or services, or regular and predictable intergovernmental transfers. The money isn’t sent where it is most needed, and recurrent maintenance is often neglected (Barma et al. 2012, 197). Despite their advantages in political representation, outer islands and remote locations can get caught up in a dynamic around the allocation of rents and aid that actually disables service delivery.

The strength and reach of the state are crucial to outer islands’ development. The Pacific has some strong and effective states, able to create policies and programs to sustain beneficial tradeoffs, links with outer islands, wider connectivity, and international opportunities. The larger island states of Polynesia are strong in this regard, perhaps because state-building has been a long process of adaptation from one powerful political system to another (Fukuyama 2011). In these countries, including Tonga, Samoa, and Fiji, politicians rely on skilled officials and long-established state capabilities to deliver services. In other locations, the enabling reach of the state is more uneven. Major sectors like health and education may well be fully supported on outer islands, but the presence of law and justice, treasury, and environmental management may all depend heavily on special leverage or a level of historical happenstance. Some parts can become dominated by one-off, project-oriented infrastructure investments, with elected MPs taking important roles in choosing beneficiaries and actually delivering services. Where parties with national programs (including public services) are also weak or absent, ministerial and sectoral responsibility for recurrent services is nowhere held to electoral account, and MPs have few incentives to try to do this. In these cases, the impact of poor governance and
unintended consequences is felt strongly in outer islands contexts. Failed regulation leading to resource degradation, or a major failure in, say, transportation and tourism infrastructure can be devastating.

Without strong political will from the center, small outer islands can experience effective state withdrawal and even become “areas of limited statehood.” State withdrawal is often gradual, or it happens because of funding fluctuations or projects started and discontinued. Some elements of the state might persist. The generator or water supply at a health clinic may have broken down, for example, but the health workers stay on until their unmaintained housing is uninhabitable. When they leave, they might bequeath a role to an untrained local, perhaps a vestige of traditional authority who will occupy an empty shell the state left behind. The slow drift toward the limited reach of the state has pervasive consequences as localities become “areas of limited statehood,” places that are not ungoverned as much as they are (quite) differently governed. As local leaders step up to fill the vacuum left by limited state presence, divergent and “hybrid” governing and legal arrangements can arise, combining traditional authority and elements of the modern state, such as councils, committees, even local legal arrangements. The new arrangements use the frameworks and language of the state but in fact represent very different kinds of power relations, involving kin, clan, and other local groups. In some situations, these arrangements can produce better outcomes than a simply secular state, but they can also unleash forces that could lead to further fragmentation and cronyism. In particular, these kinds of arrangements struggle to deal with conflict involving natural resources; they are not strong in relation to resource extractors with well-developed central connections.

Steps can be taken to strengthen local representation and hybrid governance, but there are real challenges in achieving this goal. Local voices need to be enabled to make their claims heard in the capital on locally felt issues, such as everyday maintenance of public services, local environmental degradation, or aging populations. Outer islands may develop strong and democratic local representation – for example, through island councils made up of traditional and modern leaders and linked to central agencies. Even in this scenario, there are no guarantees of access to rising central funding and its allocations, or that projects built will be well-run and maintained, or that the MPs will act in the greater public good. While there is a need for institutional innovation to galvanize local voices, incumbent MPs are unlikely to support the rise of local institutions that can generate and empower political competitors and help them reach national audiences and policy arenas.

Outer islands’ political economy has a powerful significance in the governance of natural resources and extractive industries. Here all of the issues of representation, fragmentation, limited state reach, and hybrid local governance come into play, with strong implications for developmental outcomes. Power relations in resource extraction contexts are highly uneven. Locals are at a huge disadvantage to extractors and their central agency regulators in such matters as securing the rights of landowners, monitoring and restoring environmental degradation, measuring the actual cubic meters being extracted, securing royalties and revenues, and the highly disruptive issues of local distribution of royalties, jobs, and other benefits (Allen 2018). Many different organizations, institutions, and political agendas overlap at various scales – local, provincial, and national. Local organizations and benefit-sharing arrangements can be brought to crisis by these “scale wars,” especially where extractors deliberately use divide-and-rule tactics, enlist the power of central agencies to frame claims legally, and set one group of landowners or resource claimants against another.
Outer Island Spotlight on: Rennell, Solomon Islands – Extractive resources spark conflict

Rennell is the larger of the two islands that make up Rennell and Bellona Province in Solomon Islands. An uplifted coral island, Rennell is sparsely populated, with 2,032 people (1,067 males, 965 females) on 660 square kilometers of land (2009 census). While Rennell is home to the World Heritage-listed Lake Tegano, parts of the island have been extensively logged and highly controversial bauxite mining began several years ago.

Lying 236 kilometers south of Honiara, the capital, Rennell can be reached via a one-hour flight or an overnight interisland sea voyage. In addition to provincial government offices, the island has a police presence in Tigoa, the provincial capital, three health facilities providing services as well as referrals to Honiara, primary schools in each of the main villages, and two high schools. The island is served by one main road, typically in poor repair.

The vast majority of the people on Rennell are Polynesian. School attendance is much higher than the national average – at 84 percent for pre-primary (national average 48 percent) and 98 percent for both primary and secondary (national average 80 percent). The education level on Rennell is also correspondingly higher, with 40 percent of adults having primary certificates, 12 percent having Form 3 certificates, 7 percent having completed Forms 5 to 7, and 10 percent having college or above.

Household amenities are very limited, with no metered drinking water service, no communal standpipes, and no electricity service. Instead, 76 percent of households use private water tanks as the main source of drinking water, 81 percent use solar energy as the main source of lighting, and 97 percent use wood or coconut as the main source of cooking energy.

In terms of livelihoods, the vast majority of households grow food for their own consumption and sell the surplus. There is very limited engagement in cash crops due to combination of the province’s small size and distance from Honiara – but 23 percent of households report growing flowers for sale. In addition, 79 percent are involved in fishing, a little higher than the national average.

Rennell’s community governance is based on a system of hereditary chiefs, with chiefly status inherited by the eldest sons of chiefly families. Chiefs have responsibility for land ownership and land-use matters. Historically, chiefs also resolved conflicts referred to them by community members – and, in some instances, proactively got involved to resolve disputes not referred to them – in keeping with their responsibility to maintain peace and ensure community cohesion.
In practice, however, the chiefly system in Rennell has been severely weakened by a number of factors. Many chiefs no longer reside in their communities (but instead in Honiara), a critical gap given that chiefly status is hereditary rather than earned. Where they have allied themselves with logging and mining companies, some chiefs are losing the trust and confidence of community members. The impact of the weakened chiefly system has been the rise in social-disorder problems in communities as well as uncoordinated engagements with logging and mining companies that result in further disputes and social-disorder problems.

Commercial logging began on Rennell in 2006. As the number of felling licenses and operators increased, so did logging-related disputes and social conflicts. Field research by Hughes and Tuhanuku (2015) suggests these conflicts typically stem from: overlaps among felling licence areas approved by the Commissioner of Forests; logging concessions including land not owned by the people who gave consent for logging; limited instances where land ownership had already been established by the chiefs or local courts; and long-standing disputes over land ownership being reignited by the grant of felling licences. Such conflicts often contribute to stop-start operations as aggrieved parties – facing formal dispute-resolution machinery that is slow, frequently ineffective, and not-infrequently corrupted – block access to loggers or confiscate their equipment.

Bauxite mining on Rennell has a shorter, and even more turbulent history, with disputes and social conflicts over the extent to which landowners actually consented to mining operations on their land and over the veracity of the regulatory processes. For instance, West Rennell landowners are involved in a court case to get the acquisition and registration of West Rennell revoked, accusing the government and mining company of fraud in the land acquisition and the leasing to the mining company. The excavation of bauxite pockets – frequently involving the loss of rich soils for food gardens - is damaging the landscape and its productivity, with the wider extractive process involving a catastrophic spill of heavy fuel oil on the coastal fringes of the island in 2019.

In the PICs, economic policy to enhance living standards and reduce inequality involves difficult choices and tradeoffs when considered from a spatial perspective. Against a background of large differences in unit cost between main and outer islands in the production of public and private goods and services, efforts for greater equality often come at the cost of lower aggregate welfare. The example of road construction illustrates the tradeoffs between maximizing overall welfare and spatial equity. If a main island has a population of 50,000 and an outer island just 1,000 people, constructing a kilometer of road on the outer island would serve far fewer people than building a kilometer on the main island. In addition, road construction is much costlier on outer islands than on main islands. Together, this implies high opportunity cost in terms of national welfare because investments with higher returns that would benefit a wider population have to be foregone.

This section provides an overview of options for policymakers at two levels. First, we discuss some of the broader issues and tradeoffs arising from the PICs economic and human geography. At a second level, we discuss specific options for enhancing incomes and livelihoods of outer island populations, improving public service delivery on the outer islands, improving connectivity, and strengthening urban management.

**Implications of the PICs economic and human geography for spatial policy design**

Outer islands' development should be considered from a spatial development perspective that contemplates the manifold interactions between outer islands and the PICs’ main islands – and indeed the world beyond. Solutions focusing solely on investments for lagging regions without considering interdependencies with leading regions and the full range of spatial development options tend to be expensive and have a poor track record of success.
The first element of such a holistic approach is to focus on people rather than places. This point recognizes the importance of temporary, circular, and permanent migration as an important pathway for people from outer islands to improve their living standards. Important aspects of policy design include facilitating intra-country migration and investing in destinations – typically the capital and main island – to accommodate migrants’ needs. For example, ensuring access to housing and education for people who have migrated from outer to main islands may have a greater welfare impact for outer island populations than investments on their home islands. However, strong urban planning and management are required to facilitate habitability and services.

From an efficiency perspective, regional development interventions should not only increase welfare in the targeted region but also be consistent with maximizing national welfare. In a narrow sense, maximizing national welfare from a spatial perspective implies that investments should target places where marginal returns are highest. Because unit costs of investments and service delivery are usually significantly higher on outer islands, investments would need to yield higher returns on outer islands than on main islands. To the extent that public sector investments and interventions have decreasing marginal returns in every location (island), this principle would support investments where the gaps in service delivery or infrastructure between main and outer islands are particularly large. In addition to increasing the welfare of all citizens, concerns about equity, preservation of communities and culture, and adverse effects of poorly managed migration are equally important aspects of territorial policy deliberations. In a broad sense, this principle highlights the importance of recognizing that tradeoffs are often involved in spatial policies and avoiding interventions on outer islands that would have high opportunity costs for main island populations.

Most policies for economic development and public service delivery have spatial implications with regard to the distribution of their costs and benefits. In the design of policies, it is important to consider that investments and activities tend to be much more costly on outer islands than on main islands. For example, national policies that mandate the use of “modern” building materials for all new schools and health facilities will be more difficult and more costly to implement on outer islands, where it is also more problematic to maintain such buildings.

Growth enhancing investments to follow opportunity

Policymakers frequently seek to foster economic activities on outer islands with the goals of reducing disparities in income and slowing migration to main islands. Spatially targeted investments in infrastructure, location-specific fiscal incentives, and improved connectivity are among the instruments to achieve these goals. Investments that benefit outer islands are often at least partly based on the expectation that they will result in more local economic activity.

Reshaping Economic Geography (2009 WDR) clearly advises against using spatially targeted growth interventions unless domestic spatial divisions are high and prevent the movement of people toward opportunity. The PICs’ small size and remoteness severely limit areas of internationally competitive, investment-driven activities. However, seeking to spread economic activities concentrated on one island over more islands would result in increasing production costs, higher prices for domestic consumers, and a loss of international competitiveness (in particular, against competing imports). Establishing new activities on outer islands is equally problematic, especially if such enterprises would not even be economical on a main island. PICs spatially targeted policies should thus be limited and aimed at the exploitation of carefully studied and clearly demonstrated economic potential that warrants such investments – especially with respect to tourism, agriculture, and extractive industries.
Spatially blind universal policies to limit spatial disparities in living standards

The 2009 WDR suggests that inequality in living standards between lagging and leading areas should be addressed mainly with spatially blind or universal policies. These policies should ensure access to basic public services and help sustain livelihoods independent of a person’s location, including by making it easier for people to move toward opportunity.

This is a highly relevant principle for the PICs, which typically seek to provide access to basic education and health services to their entire populations, independent of location. This should clearly remain a priority. It is important to note, however, that investment in people does not necessarily imply a broad range of health and education services should be provided on outer islands. Countries typically seek to provide basic education and health services in proximity to all populations; for other services, investments in people could imply facilitating outer island residents’ access to services on main islands – for example, by providing subsidies for transport and living costs away from home while accessing the services.

Facilitating movement toward opportunity

Measures to enhance the movement of people should be the mainstay of development policy when lagging regions have few people and small shares of the country’s poor (2009 WDR). While many of the PICs’ outer islands meet these criteria, concerns about adverse impacts of internal migration on both main and outer islands have made governments reluctant to pursue this option, and they often seek to slow down rather than encourage migration.

Concerns about adverse impacts on main islands relate to the capacity of urban areas to absorb migrants, overcrowding, adverse social consequences of unplanned urbanization, and the potential for conflict between established populations and new arrivals. Such adverse impacts can be mitigated through adequate urban planning, management, and investments to ensure infrastructure, health, housing, education and other urban services can meet the need of migrants from outer islands.

Concerns about adverse impacts on outer island communities center on maintaining the cultural and spatial identities of existing populations; the adverse social impacts of shrinking island communities, especially when working-age persons migrate and the young and old are left behind; the sustainability and increasing cost of public services provision to outer islands with small and shrinking populations; and the capacity to maintain sovereignty over outer islands and economically valuable claims to associated exclusive economic zones. However, migration also helps sustain outer islands through the flow of remittances and by strengthening the voice of outer islands on main islands.

On balance, migration is an important pathway for people from outer islands to improve their livelihoods, opening up a broader set of opportunities for them. At the same time, this study’s analysis of migration data shows migration does not result in a dramatic decline in outer island populations for most locations. On average, migration helps keep populations on outer islands stable and mitigates pressures on fragile ecosystems that could arise from expanding outer island populations. Rather than neglecting main or outer islands, a balanced approach combines investments in urban areas to accommodate migrants with support for outer island populations in achieving better welfare and equity outcomes.

Institutions to cope with fragmentation, distance in especially dislocated contexts

In addition to policies that promote access to basic services and enhance connectivity for outer islands and remote locales, there remains a need to shape institutions in ways that will not exacerbate the negative effects of both fragmentation and distance and the tendencies toward
certain kinds of clientelism they engender. The “Sea of Islands” perspective may contain some hints about ways forward. This implies a system that balances traditional norms and strong relationships that should be maintained in outer islands with the importance of boosting connectivity for migration and agglomeration benefits on main islands. While institutions that combine legislative and executive powers in peripheries (e.g., constituency development funds) are tempting because they consolidate local political power with central funding and provide what appear to be beneficial local investments, these mechanisms tend to yield clientelism, marginally beneficial investments from a national perspective, and competition for funds that provoke violent contests over electoral positions. There is a need to create political structures in the outer islands that can bring people together and enable them to have representative political, executive, and legal links to the core. These are not simply politics of a single-member, first-past-the-post electorate, or its local ward equivalents. All parties must be able to be represented in these contexts, including ethnic and clan leaders. Perhaps some form of joint, or multiple MP/electorate, representation (including gender allocations) is best – a committee or council, able to contend but also to unite and connect. At the same time, they need a real and powerful reach into central budget allocating processes.

Currently, no single Pacific nation appears to have solved this political balancing act well. But perhaps some hybrid systems in Samoa and Cook Islands might provide a way forward. Indifferent ways, Samoa and Cook Islands represent political hybrids, involving traditional and modern governing forms in the case of Samoa and autonomy and international association in the case of Cook Islands. Samoa’s matai system4 combines parliamentary democracy and universal suffrage with traditional authority (only traditional matai can be elected), consolidated state power, and political stability, albeit with a limited female representation similar to other Pacific contexts. The Cook Islands combine remarkable self-governing parliamentary democracy and foreign policy autonomy with a rich and economically vital “free association” with New Zealand.

In the following section, we discuss policy options for improving living standards with a focus on five interconnected areas – harnessing the economic potential of outer islands, public works schemes and social protection, public services, connectivity, and urban management.

Harnessing the economic potential of outer islands

As discussed above, economic opportunities on outer islands tend to be very limited and any government interventions should be targeted at exploiting such opportunities. Interventions can incentivize production in certain sectors (generally agriculture), either through input subsidies or price supports (e.g., the copra subsidy schemes in Kiribati and RMI). Governments may also attempt to strengthen the enabling conditions for economic activity by funding investments, either in physical capital (e.g., connectivity-enhancing infrastructure) or human capital (education and training). In terms of their direct, first-round effects on livelihoods, many of these mechanisms may be less efficient than targeted cash transfers through formal social-protection schemes. Nevertheless, government intervention along each of these lines may be justified to the extent that it helps resolve existing market failures, creates positive externalities, or provides a more politically feasible means of realizing social objectives. For instance, agricultural subsidies (either to inputs or outputs) are generally costly to provide, difficult to target, and distort production decisions. Nevertheless, the justification for subsidies improves if there are (i) market failures like information constraints or missing credit markets; (ii) positive spillovers from having a higher proportion of working-age members employed rather than unemployed; and/or (iii) difficulties associated with other mechanisms for redistributing public resources to support livelihoods. PIC outer islands may be more likely to exhibit some of these characteristics. Moreover, potential distortions to production decisions – a key downside of most agricultural subsidy schemes – may be less of a concern because relatively few alternative income-generating opportunities are available.

4 Matais are family and clan chiefs in Samoa.
Investment in outer island infrastructure may also be difficult to justify under a traditional cost-benefit approach that looks to spur local economic activity and trade and achieve positive economic returns above some “hurdle” rate. But if the services provided by such infrastructure have justified spillovers on livelihoods (e.g., by improving connectivity within or between islands), such investment might be considered as well. However, proper evaluation of these potential benefits is needed.

**Direct support for agricultural production and fishing.** Agriculture and fishing are the main livelihood-generating activities on most outer islands, and governments often offer subsidies to support it. The disadvantages of such schemes are well known. As a mechanism to facilitate increased production, subsidies can be costly, particularly if government pays above market prices, and may serve to promote the continuation of activities that are fundamentally unproductive rather than incentivize shifts into more productive or socially beneficial activities. As a social welfare scheme, input subsidies or price supports are often poorly targeted, with benefits flowing to those who are less in need but more capable of taking advantage of the distorted incentives implicit in such schemes. Kiribati’s copra subsidy scheme – which pays AUD$2 per kilogram, well above the world market price (farmgate prices in the Philippines were around AUD0.45/kilogram in December 2019) – suffers from both of these disadvantages. In a country like Kiribati, however, supporting livelihoods through more direct social protection mechanisms may be logistically and politically difficult, and the availability of alternative, more profitable activities to copra farming might be less evident. The case for the copra subsidy – as a second-best mechanism of distributing fishing-related revenues across the population in a manner that supports outer island livelihoods – may therefore be stronger in Kiribati than in other contexts. But less costly and distortive alternatives should be evaluated. As a general rule, input subsidies are likely to be easier to justify, particularly for inputs that are used to produce a range of outputs and, for that reason, are less likely to negatively distort behavior. Information (e.g., agricultural extension services) and credit are two good examples. Such support may also be justified to the extent it addresses market failures in the provision of these inputs.

**Direct support for tourism.** Tourism plays an important role in the economies of Palau, Fiji, Samoa, Tonga, and Vanuatu as a source of export earnings, tax revenues, and employment. The sobering impact of COVID-19 and the collapse of tourism due to the border closings has made the importance of the sector – and its vulnerability – particularly evident. Much of the economic activity and employment generated by tourism is concentrated in the capitals and/or main islands. Historical experience suggests tourism is a viable driver of incomes and employment for only a limited number of PIC outer islands. In addition to a local product capable of attracting tourists (e.g., whales on Vava’u, the Yasur volcano on Tanna, sports fishing in Kiritimati), outer islands need connectivity to allow tourists to reach the destinations and at least a basic level of on-island amenities – accommodation, food, access to utilities, etc. Given the coordination issues, high costs, and uncertain payoffs involved in developing local attractions and connectivity, a carefully targeted approach is needed when considering public investments to help boost outer island tourism. Public investment plans and proposals to provide private-sector incentives should be closely vetted and directed only toward those outer islands that possess natural characteristics with realistic potential to attract international tourists and sufficient scale to sustainably provide the necessary on-island services.

**Investing in infrastructure and connectivity.** Infrastructure is a central part of government plans for many PIC outer islands, and these plans are frequently supported by development partners who provide financing for seaports, airports, roads, and ICT-enabling infrastructure. A lack of public infrastructure is an important constraint to the development of PICs’ agriculture and tourism sectors. But in the absence of a fundamental driver of economic activity, investment in infrastructure – in and of itself – cannot be expected to provide a significant boost to outer island incomes over the long term. Even for islands that do have commercial potential in agriculture or tourism, infrastructure will generally involve a substantial upfront cost that in many cases
will outweigh the future stream of additional income that might be generated. However, some infrastructure projects may be justified if they directly improve livelihoods – e.g., by increasing mobility and access to goods and services – even if the extent to which they catalyze higher incomes is limited. Small-scale infrastructure projects can also provide the additional dividend of employment to local beneficiaries, and experience in the Pacific suggests that such projects have had some success in meeting specific needs identified by outer island communities.

**Investing in human capital.** The delivery of quality education and training services to outer island populations is key to other interventions’ success. In Vanuatu’s tourism sector, for example, training facilities were rated as the highest priority among a range of enabling public investments with potential to unlock demand (World Bank 2020). Surveyed operators noted that skilled workers were needed to enable higher standards and improve efficiency. Unlike other interventions, education is an investment with benefits that remain with individual recipients rather than being tied to physical locations. By seeking more productive jobs elsewhere, beneficiaries can reap education’s rewards even if income-earning opportunities are not available on outer islands. From a livelihood perspective, therefore, sound arguments support subsidizing the higher cost of education on outer islands, incentivizing its acquisition (to overcome information constraints and promote positive externalities), and serving as a more politically and culturally palatable alternative to cash transfers. Such subsidies will have higher payoffs to the extent that outer island residents have access to quality education, which may require access to off-island options in some cases.

**Investments in preventive health** – especially prevention of noncommunicable diseases (NCDs) - and health care are also essential investments in human capital. As highlighted in Pacific Possible, the high prevalence of NCDs in the PICs causes large lifetime losses in income and imposes high cost for treatment and management. Prevalence of NCDs on outer islands is high, and anecdotal information suggests that higher cash incomes and access to foods not produced on the outer islands results in a shift to unhealthier consumption patterns and a potential increase in the incidence of NCDs.

**Table 2: Main takeaways – options for harnessing the economic potential of outer islands**

<table>
<thead>
<tr>
<th>Economic activity on many outer islands is mostly limited to agriculture and fishing, with few opportunities to earn cash incomes. The economic geography of outer islands largely precludes the development of other private sector activities that could generate more employment and higher incomes. Tourism is one exception; however, high transport and investment costs paired with small size mean that only a handful of Pacific outer islands can maintain a viable tourism sector. Most PICs deploy a range of measures to boost outer island employment and incomes.</th>
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<tr>
<th>Price support schemes for agricultural products (such as copra) tend to be economically inefficient, poorly targeted, and distort households’ labor allocation. Input subsidies (e.g., for credit and extension services) tend to have a stronger justification and may help address market failures in the provision of such inputs in selected cases.</th>
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<tr>
<th>Interventions to support tourism should be thoroughly vetted and targeted only at those outer islands that possess natural characteristics with realistic potential to attract international tourists and sufficient scale to sustainably provide at least a basic level of on-island amenities (e.g., accommodation, food, public utilities).</th>
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<tr>
<th>While investment in infrastructure – in and of itself – cannot be expected to provide a significant boost to outer island incomes over the longer term, some outer island infrastructure projects may nevertheless be justified if they directly improve livelihoods in a cost-effective way (even without positive financial returns).</th>
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<tr>
<th>Subsidies to education help to incentivize schooling – enabling access to a wider range of employment opportunities on outer islands and elsewhere while directly reducing pressures on household budgets.</th>
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<tr>
<th>Measures to support healthy outer island populations, especially the prevention of non-communicable diseases, are important not only as key elements of the populations’ well-being but also as a means of reducing income losses due to mortality and morbidity and associated cost.</th>
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</table>
Public works schemes and social protection

For many outer islands, exploitable economic opportunities are limited. In addition, the dependence on a narrow range of activities as sources of livelihoods creates vulnerability to island-wide shocks such as natural disasters, pandemics, or changes in the demand for island products or household specific shocks such as illness or loss of remittances. Consequently, public works and social protection schemes can help to safeguard outer island livelihoods.

Public sector employment and public works programs. For governments with sufficient revenues to sustain higher levels of outer island public-sector employment, this might constitute a double dividend of greater job opportunities and improved service delivery. Relative to total livelihood benefits provided, however, such strategies are likely to be expensive due to uneven management capacity and the higher cost of outer islands’ service provision. At the same time, outer island residents may bypass locally produced services that are lower quality. In addition, employment benefits depend on locals acquiring education/training adequate to fill jobs and being willing to stay on island once they do. In practice, a lack of skills on outer islands may mean a large proportion of public sector positions may be filled by workers from main islands. An alternative strategy is to promote the use of local employment to build, maintain, or rehabilitate infrastructure, assets, or natural resources. Such work is generally suitable for individuals with less formal education and skills, and the requisite training can often be provided on an as-needed basis in a relatively short period of time.

Social protection schemes. For governments concerned with improving outer islands’ livelihoods, an alternative to supporting income-generating activities and employment is direct transfers from central governments, either through formal social protection schemes or the provision of subsidized goods and services. In the PICs, formal social protection programs tend to be small, constituting a particular constraint to helping the vulnerable. This has become particularly evident during the COVID-19 pandemic. Most PICs have established contributory pensions for the relatively small proportion of the total workforce in the formal sector. Universal old age pensions are the most common type of non-contributory social protection. Such schemes have the potential to reduce hardship on outer islands, which typically have a higher proportion of elderly residents because working-age cohorts tend to migrate in search of opportunities. Moreover, the transfers’ negative incentive effects tend to be lower for the elderly than for working-age individuals. Nevertheless, there is a traditional aversion to cash transfer schemes – but this may change in the aftermath of the COVID-19 pandemic. Several PIC governments have mostly focused on providing free or low-cost services to the population (including those living on outer islands) via school grants, fee-free education schemes, school feeding programs, etc. Cash transfer schemes designed to pay out in the aftermath of natural disasters or other economic shocks may be more likely than other social protection schemes to gain traction among PIC governments, given their need to be able to quickly support affected populations when disasters and economic shocks strike.

Table 3: Main takeaways – options for employment and social protection

<table>
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<tr>
<th>Harnessing the economic potential of outer islands</th>
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<tbody>
<tr>
<td>On many outer islands, there are few exploitable economic opportunities beyond subsistence agriculture and fishing. In addition, the narrow economic base makes outer islands particularly vulnerable to natural disasters and other shocks that can destroy livelihoods. Government interventions in the form of public works and social protection schemes could play an important role in securing and enhancing livelihoods.</td>
</tr>
</tbody>
</table>

| Public works programs | have the potential to deliver to outer island populations employment, training, and work experience, and improved public services and infrastructure to outer island populations. However, relative to the total livelihood benefits provided, such strategies are likely to be expensive due to uneven management capacity and the higher cost of service provision on outer islands. |

| Well-designed social protection schemes | can play an important role in complementing traditional, community-based social safety nets. Given the high vulnerability to external shocks, social protection schemes that can respond quickly when such shocks occur may be more effective and less costly than ad hoc support measures. |
Strengthening public service delivery in the outer islands

Virtually all PICs seek to ensure access to public services – especially education and health services – to all citizens, independent of their location. In addition to the many well documented benefits of education and health spending, investments in people rather than in places carry the additional benefit of being portable. This is particularly important in the outer island context because it allows people to search for opportunities and locations with the highest returns on these investments. In addition, investments in human capital remain with the person and are not lost if for any reason a person decides to or has to migrate away from the outer island. As such, these investments are less vulnerable to climate change and natural disasters, when compared to location specific investments such as infrastructure. In providing such services to outer island populations, governments face a range of supply and demand side challenges that need to be addressed, including the question of whether a particular service should be provided in proximity to local populations are whether it is more cost-effective to provide it in a central location and have people travel for access.

To make clear what policymakers face with respect to the delivery of basic health and education services to outer island populations, it is useful to break the choices down into a set of core questions (Figure 25). First, there is the choice of what services the population should be entitled to, irrespective of where they live. The analysis of census data suggests that all PIC governments seek to ensure access to full primary education and preventive and primary health care. Second, there is the choice of where people should be entitled to receive these services. Students may be asked to live away from home for secondary schooling, and patients may go to main islands for complex clinical care. Third, the choice of how those services will be provided. Teaching may be done remotely, and medical personnel might rotate among island clinics. These choices about how to provide services combine with the what and where decisions to influence the costs of service delivery, the capabilities required to provide it, and the quality of what is possible. Fourth, there is the question of who is responsible for the services’ provision – what levels of government? How policymakers answer these questions have significant implications for equity and costs in delivering public services.

Figure 25: Core questions for service delivery to outer island populations

<table>
<thead>
<tr>
<th>WHAT services should be provided to WHOM?</th>
<th>WHERE should those services be provided?</th>
<th>HOW should those services be provided?</th>
<th>WHO should be responsible for the service provision?</th>
</tr>
</thead>
</table>

Source: Author, drawing on the framework set out in OECD (2010).

Ensuring that everyone receives some basic level of services, irrespective of where they live, implies governments will incur increased costs for service delivery on remote islands. Typically, this implies that residents in the capitals contribute to covering the increased costs either through higher taxes or a more limited range and/or quality of services provided to everyone to offset those higher costs. Even if basic public services are provided for free at the point of use, the distribution of private costs may fall more heavily on outer island populations. They still have to travel further than urban residents to access some basic services. If there are user fees set on a national scale, these are likely to represent a higher proportion of income for people on outer islands than in the capital, a reflection of the fact that outer island populations are typically disproportionately represented in lower-income quintiles. Across the PICs, some outer island residents relocate to the capital or smaller regional hubs to avoid the poorer access, poorer quality, or higher cost of basic services on outer islands. The people most able to relocate are
likely to come disproportionately from higher-income quintiles, worsening the underlying equity implications of higher cost, poorer access, or poorer quality for basic services on outer islands.

**Supply-side challenges.** Aside from the cost disadvantages, there are supply-side challenges in delivering basic health and education services on the PICs’ outer islands (Figure 26). The hurdles pertain to a range of areas, including staffing and expertise, facilities and infrastructure, buildings and equipment, basic supplies, financial management, and monitoring and supervision. Each of these challenges can be tackled in ways that mitigate at least some of their impact on service delivery. The PICs are replete with successful examples of innovations – some borrowed from other countries with small, remote populations to serve, some specific to PIC contexts. For example, teaching and nursing graduates can be recruited from throughout the country and posted to their home islands in an attempt to increase the likelihood of their accepting and remaining in these outer island posts. In education, tablets with pre-loaded materials can improve the quality of education and the range of subject areas available to students, enabling non-specialist teachers to facilitate learning. For the management of supply chains for drugs and medical supplies, digital information systems are significantly improving the availability, timeliness, and cost of supplies on outer islands. Radio or mobile phone access can support regular supervision of outer island staff by managers located in the capital or regional hubs.
| Difficulties posting and retaining skilled staff | • Lack of willingness of skilled/qualified staff to be posted to outer islands can result in unfilled posts and/or less skilled/qualified staff on outer islands.  
  • Outer island postings typically incur additional costs for relocation, leave passages, and housing. |
| Attrition of technical skills during postings | • De-skilling of staff can occur due to lack of use of some technical skills during outer island postings and lack of professional development from infrequent or absent in-service training, peer learning opportunities, coaching, and mentoring. |
| Limited scope for specialization of staff/equipment | • The limited specialization of staff, equipment, and materials possible in outer islands limits the range and quality of health services and educational subjects that can be delivered. |
| Limited redundancy in staffing | • If there is only one trained health worker or school teacher, facilities may be closed whenever the health work/teacher is sick or on leave.  
  • If the one health worker is a family member, relatives may not bring some health problems to them. |
| Absent or inadequate infrastructure | • Water, sanitation (especially significant for women and girls), electricity, communications, and waste disposal services at education and health facilities in outer islands may be very costly and/or inadequate.  
  • Remoteness from financial services can mean staff are absent while getting their salaries. |
| Inadequate buildings and equipment | • The supply of materials and tools to construct and maintain education and health facilities (buildings and equipment), staff housing, and vehicles, may be very costly and unreliable. |
| Uncoordinated capital and recurrent budgets | • Uncoordinated capital and recurrent spending decisions tend to become more intractable when recurrent spending decisions occur through the state machinery while politicians have discretionary control over capital spending decisions in their constituencies through parallel systems of constituency funds. |
| Supply chain challenges for recurrent inputs | • The frequency, reliability, cost, and quality (including cold-chain management for health) of the supply chain for medical and educational supplies tends to be more challenging the further facilities are from the capital or regional hub. |
| Inadequate PFM systems | • Where inputs require local payments, the PFM system must be capable of supplying cash to facilities, otherwise service delivery will be affected or facilities are likely to impose user fees (with consequent equity implications). |
| Limited supervision and monitoring | • The supervision and monitoring of staff attendance, facility and equipment standards, and inventory levels is often infrequent or non-existent due to the costs and time required to undertake it or the lack of incentives of those responsible to do it. |
**Demand-side challenges.** The complement to supply-side challenges are the demand-side challenges of delivering health and education services to outer islands. Decisions on the what, where, how, and who questions of services delivery are shaped by (i) voter preferences on public services; (ii) electoral systems that aggregate these preferences; (iii) elected leaders who interpret the aggregated voter preferences; and (iv) the skills and tools political leaders (and agency heads) use in managing public services to ensure the delivery of what the public demands. The hurdles pertain to a range of issues, including accountability, transparency, management, communications, and incentives for policymakers (Figure 27).

Figure 27: Demand-side challenges to basic education and health services delivery on outer islands

<table>
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<tr>
<th>Lack of reflection of public services in voting/politics</th>
<th>• Where personalized patronage relationships characterize politician-voter relationships and programmatic political parties are weak or absent, voting behavior does not tend to reflect voters’ interests in public service delivery.</th>
</tr>
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</table>
| Lack of specification of service standards | • It is harder for demand-side measures to be effective where the services to be delivered at each facility are not clearly identified, the standards of service are not specified, and this information is not made readily available to the public.  
• On outer islands, there are fewer means for users to infer this information, if it is missing. |
| Lack of transparency on input supply | • The effectiveness of demand-side measures is undermined when it is difficult to assign responsibility for inadequate service because the supply of the requisite inputs to facilities is not monitored and information about it is not made available to the public or specific monitoring groups.  
• On outer islands, where supply-chain challenges are pronounced, this information gap is important. |
| Lack of transparency on outcome quality | • Demand-side measures are more difficult to make effective when users cannot judge key aspects of the quality of the services being delivered (e.g., users can judge whether a clinic is open and in reasonable repair, but it is harder for them to judge whether staff skills and expertise are strong).  
• On outer islands, there are fewer comparators from which users can infer this missing information. |
| Inadequate PFM systems | • Demand-side measures that involve providing users with more control of resources for service delivery require PFM system with well-defined capabilities.  
• These capabilities are very challenging in outer island contexts, for instance mechanisms to channel cash to school or health clinic boards, and for the boards to account for and report on their use. |
| Misalignment of responsibility and control | • When service delivery responsibility and control are misaligned, it is more difficult for demand-side measures to be effective because those responsible may receive feedback but lack control, making them unable to take action to remedy weaknesses.  
• While not an outer island problem per se, remoteness may make misalignment harder to overcome. |
| Lack of feedback loops to responsible agents | • To be effective, demand-side measures require feedback loops to the responsible officers.  
• On outer islands, it is typically more challenging to establish and maintain such feedback loops. |
| Social or familial ties that inhibit feedback | • Larger population centers bring a degree of anonymity (somewhat limited in the still small capitals and regional hubs of many PICs) that may make users more willing to provide negative feedback – if warranted.  
• On outer islands, users may not be willing to provide negative feedback even if warranted due to closer social or familial ties to frontline staff. |

As on the supply side, the PICs provide examples of demand-side challenges being tackled in ways that mitigate at least some of the impacts on services delivery in the outer islands. In health, many PICs have made considerable progress in collecting and analyzing data on health outcomes at a disaggregated level. Health ministries could use the data to identify areas and facilities with weak outcomes, opening the door to empowering citizens to more effectively demand investigation and action. In education, the Marshall Islands stand out for transparency in making public the results of its standardized assessments of student achievement. Parents can see which schools provide children with the best learning outcomes and how these results change over time. In PICs where this information is not released publicly, it is more difficult for informed demand-side pressures to make the case for improvements in services delivery.

Addressing the supply side challenges of delivering health and education services on PICs’ outer islands requires first of all getting the “analog” basics right. The rationale for this is straightforward: No amount of technological innovation will help improve service delivery if the health or education delivery systems are not managing the more basic aspects of the supply side. Real-time information on medical supplies in outer island facilities is of limited use, for instance, if ordering systems do not account for infrequent and unreliable shipping services. If the timing of the next shipping service is too late, the alternative probably will be very costly urgent air freight. If public service managers do not place a high priority on teaching quality in schools, investing in new technology to facilitate remote support, supervision, and mentoring for teachers is unlikely to address the binding constraint to learning outcomes. It is important to first correctly identify why supply-side challenges to service delivery have not yet been tackled effectively on outer islands; only then is it time to consider how to address the challenges. Once the basic mechanisms such as proper public financial, human resource, and supply management are in place, new technologies open up important opportunities for more efficient and effective service delivery on outer islands.

Demand-side measures that reinforce accountability have an important role in improving service delivery by providing feedback to decisionmakers on weaknesses in service delivery. In PICs where personalized patronage characterizes politician-voter relations, opportunities are undoubtedly more limited, but they still exist in particular circumstances. Specifically, it would require service delivery units reasonably well insulated from political leaders or subject to subnational governments or non-state authorities that have stronger horizontal accountability loops than the central government. Where demand-side measures can fit the broader political economy context, realistic, clear, and observable standards for services are communicated to communities. The measurement and publication of information about service delivery outcomes are essential for citizens to assess whether resources are being deployed effectively and efficiently, including such basic issues as what services they should expect to receive from health clinics, what children should learn in school, presence of nurses and teachers at facilities, availability of medical supplies and learning materials, etc.

Accurately diagnosing what really constrains service delivery on outer islands before seeking to identify responses is of utmost importance. For instance, investing in new technology for supply-chain management is unlikely to yield better results if the binding constraint is a staff that does not use the existing tools available to them to effectively manage the supply chain. Instead, the first thing is to understand why the staff does not use the existing tools – is it due to lack of understanding, skills, time, connectivity, motivation, supervision, or something else? Correctly understanding the problem is necessarily for identifying effective solutions.

The finding that almost every supply- and demand-side challenge has workable solutions utilized in some countries or on some outer islands suggests considerable scope for PICs to benefit from each other’s experiences, examining what has worked well in what circumstances and responding to the particular challenges facing each country. What is more, foundations exist to adapt innovative responses instituted in other countries with remote, sparse population groupings.
Demand side issues

In ways that were never before possible, but they will not do so if dysfunctions in the underlying systems turning to new technologies for solutions. ICT-based solutions can help address many of these challenges.

Supply side issues

The key recommendations to deal with the supply side challenges particular to public service delivery on outer islands is to accurately identify the source of observed problems and to get the basics right before turning to new technologies for solutions. ICT-based solutions can help address many of these challenges in ways that were never before possible, but they will not do so if dysfunctions in the underlying systems remain unaddressed.

To tackle the limited scope for specialization of staff and/or equipment, have a clear delineation of what types of services will be provided to whom, where, how, and under whose responsibility. This provides the basis for allocating resources across the system for such initiatives as effective outer island referral chains and/or telemedicine in health or an effective delivery system for specialized subjects to outer island students in education (remotely or at boarding schools).

Posting and retaining difficulties for skilled staff, avoiding skill attrition, providing supervision and monitoring during outer island postings, and addressing outer island-specific supply chain and PFM difficulties require cultivating managers and workforces that deliver services in accordance with a delineated plan and gear service delivery throughout the system – including on outer islands – to following that plan. The specifics include human resource management systems that view outer island rotations as essential to career paths, mitigate skills attrition through dedicated supervision and training for outer island staff in post and on return, and provide dedicated supervision and monitoring for outer island staff. They also include good supply chain management and fit-for-purpose PFM systems that account for foreseeable challenges on outer islands.

While not restricted to outer island service delivery, uncoordinated capital and recurrent budgets are more likely in outer island contexts, where communities, donors, or politicians (through constituency development funds) tend to provide a higher share of capital goods (buildings, equipment, water and electricity supplies, etc.). Lack of coordination between capital spending decisions and recurrent budgets is not only inefficient but also can debilitate service delivery. Unified decision-making across capital and recurrent budgets has to be enforced – giving grants to communities and allowing them to contribute the funds to maintaining assets, requiring donors to cover the recurrent costs of their capital contributions, and not giving politicians discretionary control over capital funds.

Demand side issues

The key recommendations to deal with the demand-side challenges particular to public service delivery on outer islands depend on the political economy context. Where citizen satisfaction with public services is reflected in voting behavior and government formation, the key underpinning for demand-side mechanisms is that clear and realistic standards for services be set and communicated to communities, and that service delivery outputs and outcomes be measured and made public. Where personalized patronage characterizes politician-citizen relations, the opportunities for effective demand-side mechanisms are more limited and require service delivery units to be reasonably well insulated from politicians or subject to subnational governments or non-state authorities that have stronger horizontal accountability loops than the central government.

For feedback from outer island communities to be effective, clear and realistic service delivery standards for outer island facilities must be set and communicated in ways that reach outer island communities, and service delivery outputs and outcomes on outer islands must be measured, with results made available to outer island communities.

Mechanisms need to be established to enable feedback from outer island residents to reach decision-makers responsible for service delivery – often officials who live in the capital, who outer island residents would not normally be able to identify and reach themselves. Where social and familial ties to frontline service providers inhibit feedback, context-appropriate options need to be found – maybe anonymous feedback but more likely local agreements on community responsibility to provide feedback, perhaps gathered through a respected community member.

Where political economy contexts provide only weak incentives for politicians to focus on ensuring the delivery of public services, demand-side mechanisms are only likely to be effective for citizens if service delivery units can be subjected to alternative authorities (whether subnational or non-state) that have stronger horizontal accountability relationships than the central government.

### Table 4: Main takeaways – options for enhanced public services for outer island populations

<table>
<thead>
<tr>
<th>Enhancing public service delivery for outer islands populations</th>
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<tbody>
<tr>
<td>Virtually all PICs seek to provide education and health services to all their citizens, independent of their location. Compared to location specific investments such as infrastructure, providing outer island populations with education and health services has the great advantage that the benefits stay with the person rather than being tied to a specific outer island. However, this does not necessarily mean that all services should be provided on outer islands; for many services, it will be more effective to bring people to services than the other way around. For those services provided on outer islands, a range of complex supply and demand side challenges need to be addressed.</td>
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| Posting and retaining difficulties for skilled staff, avoiding skill attrition, providing supervision and monitoring during outer island postings, and addressing outer island-specific supply chain and PFM difficulties require cultivating managers and workforces that deliver services in accordance with a delineated plan and gear service delivery throughout the system – including on outer islands – to following that plan. The specifics include human resource management systems that view outer island rotations as essential to career paths, mitigate skills attrition through dedicated supervision and training for outer island staff in post and on return, and provide dedicated supervision and monitoring for outer island staff. They also include good supply chain management and fit-for-purpose PFM systems that account for foreseeable challenges on outer islands. |

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| Mechanisms need to be established to enable feedback from outer island residents to reach decision-makers responsible for service delivery – often officials who live in the capital, who outer island residents would not normally be able to identify and reach themselves. Where social and familial ties to frontline service providers inhibit feedback, context-appropriate options need to be found – maybe anonymous feedback but more likely local agreements on community responsibility to provide feedback, perhaps gathered through a respected community member. |

| Where political economy contexts provide only weak incentives for politicians to focus on ensuring the delivery of public services, demand-side mechanisms are only likely to be effective for citizens if service delivery units can be subjected to alternative authorities (whether subnational or non-state) that have stronger horizontal accountability relationships than the central government. |
Improving connectivity services

Enhancing the connectivity of outer islands is a priority for most PICs. Numerous projects are currently being implemented, often with the support of the World Bank and other development partners, to improve maritime infrastructure (e.g., in RMI, FSM, and Tuvalu), aviation infrastructure (e.g., in Vanuatu, Solomon Islands), and ICT connectivity (e.g., in FSM, Tuvalu). Spatial realities, both geographic (remoteness) and demographic (urbanization), suggest that outer islands’ connectivity will continue to struggle in overcoming a fundamental challenge – the combination of low volumes, long distances, and high costs that sap the commercial viability of many domestic services.

Expanding connectivity services to outer islands raises a number of key issues. They start with identifying and prioritizing least-cost solutions to provide demand-responsive connectivity. The high (fixed) cost of investments in connectivity infrastructure and the limited financial capacity of most PICs makes it essential to adequately prioritize and sequence investments across islands and time. An effective interisland transport system should be able to provide outer island residents with accessible, reliable, and consistent transportation services at affordable prices. On the other hand, countries should not overinvest in infrastructure they cannot afford. Better interisland transport statistics, including accurate data on passenger and cargo movements, would help PIC governments better forecast outer island transport demand, improving their ability to make appropriate infrastructure investments on outer islands. Another aspect of physical infrastructure is adequate maintenance. Most PICs fail to allocate enough funding to support the ongoing operation and maintenance of their outer island infrastructures.

Private-sector participation has the potential to augment the provision of connectivity services, although constraints on competition arising from small market size and capacity for adequate regulation need to be considered. This will require a clear separation between elements of natural monopoly (e.g., port infrastructure) and services where competition is feasible (e.g., stevedoring). In situations of limited competition, adequate regulation becomes important and countries will need to consider the tradeoffs between potential efficiency gains from greater private-sector participation and increased transaction costs (and related capacity requirements) from adequate regulation. Private participation in the provision of domestic air services is an important pathway to benefiting from economies of scale in the operation of routes. For uneconomical routes, governments could consider subsidies to attract participation from private airlines through competitive tenders.

The absence of economies of scale makes it difficult for one country to offer adequate and affordable interisland transportation services. The PICs might gain from regional cooperation in transport, both by sea and air. Partnering with neighboring countries could invite private shipping operators and airlines from other countries into an enlarged market through shared competitive tenders. In some cases, regional cooperation might take more limited forms. Better coordination and cooperation between PICs on air and sea routes as well as fiber-optic cables and satellite connections can help to improve services and reduce costs. Another possibility is standardization of equipment and procedures. Groups of countries using the same vessels and aircraft could help to reduce unit cost through exploitation of economies of scale in procurement, operations and maintenance, technical support, and training.
Investing in urban development to benefit urban populations and internal migrants

Migration of people from outer islands to urban areas is an important pathway for outer island populations to improve their livelihoods through better access to economic and social opportunities and public services. Investments in urban development are important to help accommodate such migration and maximize its benefits while preventing adverse impacts.

Urbanization is not a new phenomenon in the PICs, and national spatial planning policies aim to better manage growth, not prevent it. Cities and towns that are resilient, inclusive, and livable do not develop by chance. Comprehensive forward planning, strengthened land administration, and investments in municipal infrastructure and services are needed to accommodate urban growth and reap its benefits (Figure 28). Although some countries (notably, Fiji) attempt to provide serviced land for lower-income groups, the majority of PICs have outdated land-administration systems that are time-consuming and costly. For example, it can take 3.5 years to register land in Kiribati, forcing many households to seek less prohibitive arrangements rooted in local customs. Static zoning plans, overly generous setbacks, and restrictive floor-area ratios or building-height limits further contribute to inefficient use of scarce land, forcing land and housing prices up within formal town boundaries. In addition, disaster risk-reduction strategies tend to focus on “no-build” zones rather than proactively assessing and encouraging opportunities to build on safer land. Underinvestment in trunk infrastructure is a missed opportunity to guide settlement to less hazardous areas. After the 2012 tsunami in Samoa, for example, the government built roads and installed water lines to open up land away from the coastline for voluntarily retreating households.
Some promising approaches offer ways to upgrade unplanned settlements. Several programs focused on innovative means of improving informal settlements’ access to services. In Kiribati, for example, the World Bank-supported Kiribati Adaptation Program-Phase III worked to provide metered water connections to households without formally registered tenure. For a World Bank-supported project in Vanuatu, engineering analysis and preliminary cost estimation demonstrated that in situ upgrading of existing informal settlements – providing a basic package of services and disaster-risk reduction measures – is both feasible and affordable in places where authorities are ready to acknowledge the settlements as permanent parts of the larger urban economy and fabric. By placing customers’ water meters at the edge of settlements, Fiji provided access to water for households and reduced meter-reading and public infrastructure costs. An understanding of the particular circumstances of individual settlements can allow governments to recognize opportunities to create stable and long-term populations with favorable conditions for providing basic services. While upgrading existing settlements is necessary, it is not sufficient to keep pace with demand. Urban and peri-urban populations will continue to grow. If serviced land reasonably close to places of employment, with acceptable hazard exposure, is not made available for lower-income groups, the symptoms of weak urban planning and underinvestment will continue to manifest.

Addressing the PICs’ challenging urban management issues will require systematic investment planning and evidence-based approaches to opening up new land for safe, resilient settlements. The following case studies on Kiribati, Vanuatu, and Fiji provide a sampling of the urbanization initiatives underway:

**Kiribati.** The country’s ability to mitigate climate risks is hampered by its highly vulnerable socio-economic and geographical situation. Poorly managed urban growth has put considerable strain on the supply of planned and serviced land for housing, businesses, social facilities, and services infrastructure, including water supply, sanitation, and urban transport. At the same time, the entire population and most infrastructure are concentrated along the coast, exposing them to extreme weather events, king tides, and sea-level rise. Kiribati has made climate change adaptation a national priority. The government has begun to consider options for adaptive and resilient development for all islands, including South Tarawa. This includes the formulation of a Long-Term Coastal Security Strategy (LTCSS), built on plausible climate change scenarios and
considering the impacts of sea-level rise, coastal inundation, episodic swell events, and shoreline change. The LTCSS promises a more coherent cross-sectoral approach to deliver improved coastal resilience and safer settlements by: (i) proposing realistic and practical options for the medium term (3-15 years) that are appropriate for a 100-year planning timeframe; (ii) enhancing public support structures and governance arrangements with an eye on financial and institutional sustainability; (iii) considering land-use needs and demand for both residential settlements/population centers and livelihoods (agriculture, fisheries, commercial, and industrial purposes); and (iv) addressing and customizing approaches for the different needs of urban South Tarawa and the rural outer Islands.

**Vanuatu.** The capital city of Port Vila grew by 4.1 percent a year from 1999 to 2009. Like many PIC capitals, the city shows marked differences between living conditions in planned and serviced neighborhoods and those in informal, unplanned settlements (either within the municipality or in adjacent peri-urban areas socially and economically connected to the city). Meeting Vanuatu’s present and future housing needs will require improving existing settlements and opening new lands to accommodate growing demand. Vanuatu Enabling Affordable and Resilient Settlements (VEARS), supported by World Bank technical assistance, has identified a multi-pronged approach for land management, planning, and supplying affordable housing in safe locations. It includes optimization of public lands, a disaster-risk reduction lens, land security and basic infrastructure for existing settlements, and evidence-based, well-planned urban expansion. Under VEURS, work has been done to map vulnerabilities in four existing informal settlements in low- to moderate-risk locations – Ohlen Mataso, Tokyo, Seaside, and Anamburu. This included assessments of options for upgrading sanitation, sewage treatment, water supply and sanitation, roads, pathways, lighting, and solid-waste management as well as an assessment of stormwater drainage and flood control in and around the settlements. The study found that in situ upgrading is feasible and affordable at an estimated $1,000-$5,000 per household, excluding external drainage costs. Improving existing settlements, however, will not be enough. Getting ahead of the challenge for safe and affordable settlements requires new subdivision for lower-middle income groups. The government identified an area of approximately 10 hectares in the Etas settlement area for further exploration as a possible greenfield development.

**Fiji.** The two dominant characteristics of Fiji’s settlement patterns are increasing urbanization (and with it, informality) and increasing littoralization (i.e., settlements along the coastline). Ongoing monitoring by the Department of Housing and the Bureau of Statistics suggests that 63 percent of the past decade’s total population growth took place in 200 or more unplanned, extra-legal, and informal settlements in urban and peri-urban areas. The government has made significant annual budgetary commitments to regularize and upgrade the informal settlements. It is incrementally investigating and, where feasible, regularizing unplanned urban settlements through participatory planning, issuing security of tenure certificates, and providing basic services through the Participatory Slum Upgrading Program and the Fiji Increasing Resilience of Informal Settlements Program. In some cases, this includes providing households in informal settlements with 99-year leases. The prime minister highlighted the efforts at the 5th Pacific Urban Forum: “Empowered by the dignity of long-term tenure, these families see the world through a new lens. Often these communities understand their own adaptation needs better than anyone else can, and when they are able to think 99 years into the future, they can plan and build better. When climate impacts bear down on our country, the adaptation measures made today will spare us future suffering and literally save lives.” Government initiatives also include multi-year funding to the Housing Authority for servicing land for sale or long lease to low/lower-middle income groups. As in almost all countries, however, public sector resources alone are not enough to meet housing demand, and a large backlog remains.
Table 6: Main takeaways – options for strengthening urban development

<table>
<thead>
<tr>
<th>Strengthening urban development</th>
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<tbody>
<tr>
<td>Urban settlements that are well planned and managed present a pathway to raise women and men -</td>
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<td>residents as well as migrants from outer islands – out of poverty and reduce disaster risk. However, well-</td>
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<td>functioning cities don’t happen by chance; they require risk- and evidence-based policies and strategic</td>
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<td>infrastructure investments to manage and strategically guide urban development.</td>
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<tr>
<td>The movement of people between outer islands, main islands, and international destinations helps</td>
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<td>promote human capital development and expand job opportunities. These movements of people to take</td>
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<td>advantage of economic opportunities supports livelihoods and would be facilitated by investments in</td>
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<td>main islands (e.g., in urban development).</td>
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<tr>
<td>Land administration policies and clear “rules of the game” are fundamental, covering mixed land uses,</td>
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<td>subdivisions, and minimum standards for basic infrastructure and disaster risk reduction in settlements.</td>
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<tr>
<td>Cost-effective upgrading of basic services in informal settlements can be feasible - if carefully planned and designed.</td>
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<td>New, well-located, and serviced settlements also need to be planned and financed to meet ongoing</td>
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<td>demand and accommodate future growth.</td>
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<tr>
<td>New ways of doing business are needed, including public sector investments in trunk infrastructure</td>
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<td>to guide development onto safe, well-located land and encourage private investment in housing.</td>
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<tr>
<td>Urbanization is not new in the PICs, and initiatives in Fiji, Vanuatu, Kiribati and other places provide examples of successful national spatial planning policies that aim to better manage urban growth, not prevent it.</td>
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</table>
The COVID-19 crisis has laid bare the cost of not addressing pre-existing gaps in the Pacific’s small island development. Starting to address these challenges now will facilitate economic recovery and lay the foundations for sustainable growth and equity. During the pandemic, geographic isolation has been a blessing by helping to enforce border closings and keeping the COVID-19 pandemic at bay. However, the relative safety has come at a hefty economic cost and brought to the fore the yawing gaps in service delivery and public resource management support in outlying small island communities. If they were to address these gaps, Pacific nations may be better prepared to manage future crises with less economic fallout and faster recoveries. The pandemic is truly a unique shock that hopefully will not be repeated in anyone’s lifetime, but the Pacific is no stranger to shocks and the fundamental development challenges outlined in this report will persist. Now is an opportunity to reflect on the underlying challenges facing the Pacific and formulate strategies to address them. It is our hope that this report and – in particular – the policy recommendations discussed in the chapter on Policy Options and Tradeoffs for Spatial Policy Design and summarized in Tables 2 through 6 will help inform the PICs’ decisions.
References


Oceania, the vast Blue Pacific Continent, consists of more than 1,000 inhabited islands spread across thousands of miles of open water. Countries in this region unite main islands – typically hosting the capital, government, and international sea- and airport – with many outer islands. Dispersed as they are, Pacific island communities are connected through trade, migration, and government links as well as through culture, traditions, and an intricate web of family and community relationships. At the same time, many outer island communities find themselves twice removed from opportunity – they are at the periphery of nations dominated by main islands, which themselves are at the periphery of the global economy.

Archipelagic Economies examines the geographic dispersion of Pacific islands’ populations and its socio-economic consequences. The study presents new measures of geographic dispersion that show the uniqueness of the Pacific island countries’ human geography. It offers a closer look at the socio-economic situation of dispersed island populations, the internal movement of people that connects communities across islands, and the political economy landscape that underpins spatial economic policy decisions. A particular focus of this book is on policy options for dealing with the challenges faced by many outer islands – limited economic opportunities, costly service delivery, obstacles to connectivity by sea, air, and ICT, and urbanization in an era of climate change.

Well-informed policies to address Pacific island countries’ pressing spatial development challenges are central to sustainable and inclusive development in the Pacific. The evidence and information provided in this book are intended to help inform the discussion that shapes these debates and decisions. In addition, it is hoped that this research contributes to a better understanding in the wider development community of the challenges facing the Pacific island countries.