



THE NATIONAL  
RESEARCH INSTITUTE  
PAPUA NEW GUINEA

# RESEARCH REPORT

## INCREASING REVENUES FOR THE BOUGAINVILLE GOVERNMENT

Satish Chand  
Ronald Duncan AO  
Theodore Levantis

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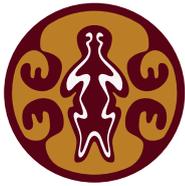
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Direct any inquiries regarding this publication to:

The PNG NRI Publications  
National Research Institute  
P.O. Box 5854  
Boroko, NCD 111  
Papua New Guinea

Tel: +675 326 0300/326 0061; Fax: +675 326 0213

Email: [pngnri@pngnri.org](mailto:pngnri@pngnri.org)

Website: [www.pngnri.org](http://www.pngnri.org)

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## About the Authors

**Satish Chand** is Professor of Finance in the School of Business at the University of New South Wales and based at the Australian Defence Force Academy in Canberra.

**Ronald Duncan AO** is Emeritus Professor in the Crawford School of Public Policy at the Australian National University.

**Theo Levantis** is a consultant economist currently based at Ernest and Young in Canberra.

# Abbreviations & Acronyms

ABG – Autonomous Bougainville Government

BPA – Bougainville Peace Agreement

JSB – Joint Supervisory Body

NRI – National Research Institute

PNG – Papua New Guinea

## Executive Summary

While the nature of the political settlement that will be reached between the Government of Papua New Guinea (PNG) and the Autonomous Bougainville Government (ABG) remains to be decided, both governments are looking to a future where Bougainville will have economic independence. This goal will, among other aspects, include progress towards attaining fiscal independence—defined as the capacity of the ABG to fund its budget from locally generated revenues.

The role of government is to provide goods and services to the public. Some of these services are provided by government departments and statutory organisations directly, while others are purchased from the private sector. In both cases, the government must raise revenues to pay for the services provided. This report canvasses the avenues for increasing revenues for the ABG. Chapter 2 is focused on the existing sources of revenues, and those that may be tapped to enhance fiscal independence. The existing revenue streams for the ABG include: value added tax (VAT), personal income tax, corporate income tax, and licences and fees charged on local supplies.

The ABG is well short of realising fiscal independence. The total appropriation for the 2020 ABG budget was approximately K440 million, of which recurrent expenditures amounted to K179 million (equalling 41 percent of the total). Of this, some 84.4 percent was sourced from the PNG government; meaning that revenues from domestic sources within Bougainville made up just 15.6 percent (i.e. K28 million) of the total recurrent expenditure. Consequently, the challenge of attaining fiscal independence just with respect to the recurrent budget is likely to remain a significant challenge for the foreseeable future.

What are the potential sources of revenues for the ABG? The answer may be divided into the opportunities over the short, medium and long term. In the short term, revenues may be raised through an extensive application of the VAT. On some estimates, the value of goods and services produced in Bougainville amounts to around one billion kina. However, much of this production is within the subsistence sector and thus falls outside the VAT net. Bringing some of this production into the formal monetary economy will increase collections of VAT.

Also in the short term, the ABG may be able to expand access to grants and loans from the PNG government, donors and multilateral agencies. Such funding may be used to invest in public infrastructure, both hard and soft, with a view to providing the preconditions for growth in private enterprise. Included in hard infrastructure are investments in water and sanitation, telecommunications, and electricity networks. Each of these investments demands detailed cost-benefit analysis, which is best undertaken with specialist input. Improved access to telecommunications, electricity, water and sanitation are critical to improvements in social outcomes and towards lowering the costs of doing business in Bougainville. Among the soft infrastructure are the systems that ensure law and order, access to land such as that held under customary ownership, and to government services. The competitiveness of access to public infrastructure determines the overall costs of doing business in an economy and is a critical factor in attracting foreign direct investment.

There are prospects for growth over the medium term from the expansion of agricultural production (mainly cocoa) and from domestication of fisheries. Cocoa remains the main export crop for Bougainville, but cocoa output remains below the peak attained before the crisis. However, there are prospects for significantly increasing cocoa yields, exports and household incomes, and thus increasing the VAT revenues. But, as the analysis of the performance of small island states around the world in Chapter 4 reveals, improving living standards significantly through cocoa production should not be a long-term goal.

Regarding the fisheries, the waters of Bougainville generate licensing fees from distant water fishing nations that could raise between K30 and K130 million for the ABG budget. However, a significant medium-term opportunity is in attracting the processing of tuna onshore, which would generate much needed employment in

Bougainville—particularly for women. A separate, detailed study on the economic value of onshore processing of tuna in Bougainville will assist the ABG in the design of policies for attracting foreign direct investment.

One of the long-term challenges for Bougainville is in creating the conditions for mining that are environmentally sustainable and socially harmonious. Bougainville has large, known deposits of minerals, some of which were mined in the lead-up to the crisis. The signatories to the peace agreement expected the recommencement of mining soon afterwards, and for this to provide the means to attaining economic independence. Unfortunately, mining has remained dormant for two decades, suggesting that a lot more work remains to be done before mining can recommence. While it may be preferable to leave the minerals underground (for future generations to exploit) as the preconditions for peaceful and sustainable mining are being put in place, the opportunity costs of the delay are the lost time, income and wellbeing of the current generation.

The analysis of the performance of other small island states in similar circumstances to Bougainville points to exploitation of tourism and remittances as being the most likely basis on which to grow the economy and government revenues. However, success on these fronts depends heavily on effective policies and governance, together with a quick rebound from the unfolding COVID-19 pandemic.

Finally, the need for increased government revenues is now greater than ever. Progressing the agenda of this report demands detailed analyses on the full costs of providing public services, the potential avenues for grants and concessional loans, and an assessment of projects that will give the highest return on public investments. This report has highlighted the importance of measures such as creating an environment friendly to foreign and domestic investment, including secure, bankable leasing of customary land; law and order, including security of contracts; and government revenue management regimes that ensure good governance.

A key point that can be drawn from this report is that important preconditions for growth in revenue sources and their management need to be put in place from the start. If the ABG goes ahead with arrangements duplicating many of the measures already in place within PNG, the danger is that, once adopted, the measures will be difficult to remove.

# Ch.1 Introduction

## 1.1 Transition to economic independence

The Autonomous Region of Bougainville (ARB) held a referendum – as mandated by the Bougainville Peace Agreement (BPA) signed in 2001 – between the 23 November and 7 December 2019. A total of 181,067 votes were cast, of which 176,928 (i.e. 97.71 percent) opted for independence of Bougainville from Papua New Guinea (PNG; Bougainville Referendum Commission [BRC], 2020). The BRC, which was responsible for holding the referendum, returned the Writ to the office of the Governor General of Papua New Guinea on 13 December 2019, and no petitions were lodged within the permitted 40-day period following the return of the Writ. The referendum was declared to be free and fair as reported by the BRC and international observers, and corroborated by the absence of any petitions following the initial announcement of the results. A peaceful referendum in a post-conflict community is a significant achievement for both the people of Bougainville and of PNG more broadly.

The next step is for the two governments to consult and provide guidance to the National Parliament of PNG, which has the mandate to ratify the final outcome (BPA, 2001, s.311). Both the PNG government and the Autonomous Bougainville Government (ABG) were preparing ahead of the referendum for the tasks to be undertaken following the release of the results (GoPNG, 2019; McKenna, 2019). The Joint Post-Referendum Ministerial Taskforce (JPRMF) was created in 2018 to oversee progress toward the referendum and the way forward following the declaration of the results of the referendum. A working group to support this taskforce, which is made up of officials from both governments, met in August 2019 and again a month later, ahead of the voting, to agree on the consultation process after the referendum. Part of the deliberations of the working group included reaching an agreement for negotiations to be staged; a stage of this process will include negotiations on fiscal arrangements in the transition to the final political settlement (GoPNG, 2020; GoPNG&ABG, 2019). These consultations are to be led by the PNG Minister for Bougainville Affairs and the ABG Minister for Peace Agreement Implementation, with support from a Secretariat comprising officials of both the PNG government and the ABG.

The ongoing consultations between the governments of PNG and Bougainville and the subsequent ratification by the Parliament of PNG will likely lead to increased self-determination for Bougainville. This report makes no assumptions about what the political arrangement might be or the form it may take; but there is consensus for Bougainville to have economic independence. Leaders from Bougainville have repeatedly expressed their desire for economic independence; that is, a local economy that is large enough and a tax capacity sufficiently developed to be able to fund the ABG budget from internal sources. Preparations for this eventuality were underway well ahead of the referendum. A Tax and Revenue Summit was held in 2017 with a view to exploring local sources of revenues for the ABG. Minister Punghau, from the ABG, has argued more recently that: ‘to be independent, we must have our own money’; thus ‘[w]e must grow, we must sustain and we must harvest our own economy’ (Punghau, 2020, pp. 10–11). PNG Prime Minister Japes Marape has also supported the notion of economic independence for Bougainville, meaning that there is consensus between the two governments to allow the ABG to manage its own economy and the budget.<sup>1</sup>

A goal of self-determination for Bougainville is to graduate into a political community that serves the interests of all its people and meets the international obligations of its newly acquired status. Among the many requirements for meeting these goals is a ‘polity’ having the capacity to fully resource the requisite functions. The companion study to this report explores the options for building the institutions of government (Dziedzic & Saunders, 2021), but here we focus exclusively on the finances that would be necessary for the transition to self-determination.

Self-determination will require Bougainville to take full responsibility for resourcing its institutions. Existing

<sup>1</sup> PM Marape has offered the option of ‘economic independence for Bougainville’ entailing economic development and self-determination as against political independence (ABC News of 14 December 2019 at <https://www.abc.net.au/news/2019-12-14/bougainville-is-sitting-on-an-actual-gold-mine/11790498>).

arrangements entail large support to the ABG budget from the national (i.e. PNG) budget. The transition to economic independence for Bougainville is likely to be an incremental process, for reasons of size and cost. Bougainville is roughly one-20th of the size of PNG in terms of population and possibly less in terms of economic output. The cost of providing public services is likely to be higher on a per capita basis in Bougainville because of its small population. Internally generated revenues accounted for just 15.6 percent of the ABG's recurrent budget for 2020 (see Chapter 2): ramping these sources of revenue up to their full potential will take considerable time and require good planning and execution. How will the ABG raise revenues from internal sources? Which services will be funded from the raised revenues? And how will the ABG demonstrate accountability for these expenditures? These questions will have to be thought through as part of the preparations for a new political future for Bougainville.

There is likely to be a long lead time to the final political settlement for Bougainville. The ratification process itself is likely to take considerable time; but no timelines have as yet been proposed regarding when this decision will be made. Furthermore, elections for the President and members of the Bougainville House of Representatives, which were due in June 2020, were delayed to begin on 12 August and finish on 1 September due to the imposition of the State of Emergency nationwide in response to the COVID-19 crisis.<sup>2</sup> Consequently, consultations with the incoming ABG are likely to be deferred to the second half of 2020, if not later. Besides, over the foreseeable future, Bougainville will remain part of the broader PNG economy, sharing a common history, geography and socio-cultural ties across space. These shared interests will remain, regardless of the final settlement regarding self-determination.

Planning for the transition to self-determination, whatever this may look like, is under way. A total of seven elements were enumerated to be considered in detail as part of the transitional arrangements; these extend from the necessary constitutional reforms through to transfer of powers from the PNG government to the ABG (GoPNG & ABG, 2019). These elements covered fiscal matters, which were further divided into increasing the fiscal powers of the ABG; including that the ABG would take full responsibility for the generation of revenues, including the allocation of expenditure and securing of foreign aid, loans and investments if assuming full sovereignty (i.e. independence). If the ABG is able to fund all of its budget from internally generated revenues, this would amount to fiscal independence; and such an outcome will also entail the ABG being accountable to the people for all its expenditures.

The rest of this chapter is structured as follows. Section 2 presents the purpose and structure of this report, and Section 3 provides the conclusions. A few words of caution are in order here: data on Bougainville is sparse; the reliability of the limited data that is available is poor; and analysis of the Bougainville economy is dated. This report's analysis is informed by discussions with key stakeholders in PNG and Bougainville, as well as by desktop research drawing on the comparative experience of the analysts.

## 1.2 The terms of reference

The purpose of this study is to consider means by which the PNG government together with the ABG can raise revenues sufficient to enable the ABG to operate as an effective polity, serving its people and the wider community.

The report covers four major areas:

1. A synopsis of the current state of the Bougainville economy, detailing the existing revenue sources for the ABG, and the main forms of government expenditure;
2. A synopsis of the priority areas for public investments – including on rebuilding physical and social

<sup>2</sup> See <https://www.rnz.co.nz/international/pacific-news/419215/bougainville-allowing-for-three-week-election-because-of-covid-19>, 17 June 2020.

infrastructure, improving law and order, and improving governance and accountability;

3. An explanation of the need to raise revenue collections to fund the above priority areas; and
4. Discussion of the possible policy interventions that could be made to increase government revenues and optimise government expenditure. Importantly, these include an expanded VAT system and all revenue from natural resources such as fishing, forestry, and minerals, collected via *ad valorem* royalties, to go to a managed fund with a share of the proceeds of the fund distributed on a regular basis to all adults registered on the electoral roll. The remainder could be devoted to spending on infrastructure.

Noting the need for the ABG to take on greater responsibilities for funding its budget and in the provision of basic services, this report discusses the existing arrangements for the raising of revenues and allocation of expenditures (Chapter 2), and the potential for expanding the tax base (Chapter 3). It then examines the potential lessons Bougainville could draw from small island nations regarding which sectors of the economy to develop to achieve economic independence (Chapter 4). The levels of expenditure required to develop infrastructure and public services to place the economy on a trajectory for achieving economic independence is left to future research, as doing so will demand detailed knowledge of the existing levels of services as well as costing data for public investments that are not available at a distance from Bougainville.

## Ch.2 Financing the Budget

### 2.1 Revenues and expenditure

This chapter provides details on the major items of expenditure and sources of revenues for the ABG budget. Expenditures are listed first, as the role of the ABG, as much as that for any government, is to provide public goods and services that have to be funded. As noted in Chapter 1 and elaborated upon later in this chapter, the bulk of funding for the ABG has been sourced from the National Budget (Chand, 2018), but this may not be the case in the future. Consequently, options for alternative sources of revenues for the budget are explored in the next two chapters.

The total appropriation for the 2020 ABG Budget was approximately K440 million, of which recurrent expenditures amounted to K179 million (i.e. equal to some 41 percent of the total as shown in Table 2.1). The main items of recurrent expenditure include Education (43 percent), Personnel Management and Administrative Services (17.6 percent), and ABG Parliamentary Services (10.1 percent). The total recurrent expenditure is an under-estimate since some public services are funded directly from the PNG Budget, and thus are not reflected in the ABG Budget. The most obvious example of this underestimation is outlays on health: the ABG Budget has an allocation of just 1 percent to Health Services, which is due to the fact that the bulk of health services are funded directly from the PNG Budget. The full costs of health provision within Bougainville would have to be estimated to get a good handle on the magnitude of the recurrent budget.

**Table 2.1: ABG Recurrent Budget 2020, Summary of Appropriations by Source**

| Autonomous Bougainville Government<br>Department       |        | GoPNG<br>Grants | Internal<br>Revenue | Budget total |       |
|--|--------|-----------------|---------------------|--------------|-------|
|  |        | K               | K                   | K            | %     |
| <b>Recurrent Budget</b>                                |        |                 |                     |              |       |
| The President and the Bougainville Executive Council   | PBEC   | 2,601,400       | 0                   | 2,601,400    | 1.5%  |
| Treasury and Finance                                   | DT&F   | 6,025,000       | 200,000             | 6,225,000    | 3.5%  |
| Personnel Management and Administrative Services       | DPMAS  | 31,473,800      | 0                   | 31,473,800   | 17.6% |
| Bougainville Peace Agreement Implementation            | DBPAI  | 4,700,000       | 2,500,000           | 7,200,000    | 4.0%  |
| Health Services  | DOH    | 1,760,000       | 0                   | 1,760,000    | 1.0%  |
| Primary Industries                                     | DPI    | 810,000         | 0                   | 810,000      | 0.5%  |
| Economic Development                                   | DED    | 1,080,000       | 0                   | 1,080,000    | 0.6%  |
| Mineral and Energy Resources                           | DMER   | 812,000         | 0                   | 812,000      | 0.5%  |
| Education  | DOE    | 77,354,100      | 0                   | 77,354,100   | 43.2% |
| Police, Corrective Services and Justice                | PCSJ   | 5,972,500       | 0                   | 5,972,500    | 3.3%  |
| Technical Services                                     | DOTS   | 820,000         | 0                   | 820,000      | 0.5%  |
| Community Development                                  | DCD    | 1,110,000       | 0                   | 1,110,000    | 0.6%  |
| Community Government                                   | DCG    | 5,535,000       | 0                   | 5,535,000    | 3.1%  |
| Lands, Physical Planning, Environment and Conservation | DLPPEC | 762,000         | 0                   | 762,000      | 0.4%  |
| Bougainville Executive Government                      | BEC    | 2,165,000       | 3,117,100           | 5,282,100    | 3.0%  |

|                                       |         |                    |                   |                    |               |
|---------------------------------------|---------|--------------------|-------------------|--------------------|---------------|
| Bougainville House of Representatives | HoR     | 6,079,000          | 3,816,350         | 9,895,350          | 5.5%          |
| ABG Parliamentary Support Services    | ABG PSS | 0                  | 18,156,550        | 18,156,550         | 10.1%         |
| Constitutional Offices                | CO      | 0                  | 200,000           | 200,000            | 0.1%          |
| Bougainville Electoral Commission     | BEC     | 1,904,200          | 0                 | 1,904,200          | 1.1%          |
| <b>Recurrent Budget total</b>         |         | <b>150,964,000</b> | <b>27,990,000</b> | <b>178,954,000</b> | <b>100.0%</b> |

Source: Department of Treasury and Finance, ABG.

The development budget for 2020 had a total appropriation of K261 million, equal to some 59 percent of the total budget (see Table 2.2). Among the main items of expenditure were the Public Investment Program (PIP), which accounted for 72 percent of the total, and Restoration (of dilapidated infrastructure), which was allocated 19 percent of the total appropriation for development programs. The above figures for development expenditures are also an under-estimate as they include just one donor-funded program totalling some K3.6 million (equal to 1.4 percent of the total) from the government of New Zealand for community policing. Among donor-funded programs missed from the development budget are those from Australia, including the upgrade of Arawa Hospital, and the construction of Water, Sanitation, and Hygiene (WASH) facilities at several locations within the ARB.

Table 2.2: ABG Budget 2020, Development Appropriations

|  |       | GoPNG<br>Grants    | Internal<br>Revenue | Budget total       |               |
|--|-------|--------------------|---------------------|--------------------|---------------|
|  |       | K                  | K                   | K                  | %             |
| Restoration and Development Program                      | RDG   | 50,000,000         | 0                   | 50,000,000         | 19.2%         |
| Public Investment Program                                | PIP   | 188,000,000        | 0                   | 188,000,000        | 72.1%         |
| Donor Funded Programs                                    | Donor | 3,600,000          | 0                   | 3,600,000          | 1.4%          |
| 2020 ABG Development Fund (NFA)                          | DPI   | 0                  | 5,000,000           | 5,000,000          | 1.9%          |
| 2018/2019 ABG Development Fund (NFA) Cash Reappropriated | DPI   | 0                  | 4,971,843           | 4,971,843          | 1.9%          |
| Recurrent Unconditional Grant 2019                       | DT&F  | 0                  | 9,000,000           | 9,000,000          | 3.5%          |
| <b>Development Budget total</b>                          |       | <b>241,600,000</b> | <b>18,971,843</b>   | <b>260,571,843</b> | <b>100.0%</b> |

Source: Department of Treasury and Finance, ABG.

The bulk of revenues for the 2020 Recurrent Budget, that is, some 84.4 percent, is sourced from the PNG government. In other words, revenues from domestic sources within Bougainville make up just 15.6 percent (i.e. K28 million) of the total recurrent expenditure of K179 million. The balance of the unconditional recurrent grant for 2019, amounting to K9 million, has been allocated to developmental expenditure. Similarly, the amounts due from National Fisheries Authority (NFA) for 2019 and 2020 have also been allocated to fund development expenditure through the Department of Primary Industries (DPI). While local taxes and charges imposed by the ABG are included in the budget estimates, the quantum of income taxes collected from businesses operating in Bougainville and VAT are also missed due to the fact that these are collected at the national level.

Before looking into potential sources of revenues for the budget in following chapters, income and expenditure data from the ABG Budget for 2020 have been used to gauge the quantum of resources being consumed to provide existing levels of services within Bougainville. Leaving aside the adequacy of these services, the information presented reveals the gap between locally generated revenues and domestic expenditures.

The rest of this chapter is structured as follows. Section 2.2 explains the existing tax and revenue sharing regime between the PNG government and the ABG. Section 2.3 then discusses the existing sources of revenues for the ABG Budget; while Section 2.4 discusses the potential for effective tax administration in Bougainville. Section 2.5 concludes with a discussion of the policy implications for effective tax administration.

## 2.2 Tax systems

The taxes that are applicable in Bougainville include those that apply at the level of the PNG nation state, plus those specific to Bougainville. A succinct summary of these taxes is provided next.

### 2.2.1 Value Added Tax (VAT)

Among the national taxes are the VAT, which is a tax that applies to individuals and businesses, and import tariffs. A VAT of 10 percent is imposed on the value of goods and services sold in PNG. Some goods, such as those destined for export, are zero-rated, meaning that VAT is not applied and the production of these goods qualifies for VAT credits on inputs used in their production. Other goods (such as public motor vehicle [PMV] fares) may be exempt from VAT, which means that VAT is not charged on sales and VAT credits for input purchases may not be claimed. While sale of land is exempt from the VAT, improvements made on real estate are subject to VAT. The tax is collected at the point of sale by the business and remitted, net of any credits earned from VAT paid on the purchase of supplies and/or inputs, to the Internal Revenue Commission (IRC) through a return filed specifically for this purpose on a monthly basis. As no tax is collected for zero-rated outputs, businesses are entitled to a credit from the IRC on any VAT paid on inputs.

Small businesses may decide not to register with the IRC for VAT purposes, but then they are not able to claim VAT credits—so, effectively their sales fall into the category of exempt goods and services. Businesses with a turnover of K250,000 or more are required to register with the IRC for VAT purposes, while those with lower returns may do so on a voluntary basis. Registration allows the IRC to monitor receipts from individual companies, audit compliance with the legislation, and link suppliers to their business clients across the value chain. Importantly, only registered businesses are allowed to charge VAT on their sales. Breaches of the VAT Act may incur penalties of up to K50,000.

### 2.2.2 Income taxes: personal and corporate taxes

Income taxes are levied on individuals and enterprises. PNG residents earning a salary or wage have their taxes deducted at source on a fortnightly basis. They are not required to lodge an annual tax return unless they are claiming expenses for earning the income. PNG has a progressive tax system, meaning that both the average and marginal tax rates increase with income level: the tax-free threshold is K7,000 and the marginal tax rate rises from 22 percent (for income between K7,001 and K18,000) to a maximum of 42 percent for all income above K250,000. Non-residents, defined as those who live in PNG for less than six months in total in any calendar year, do not have a tax-free threshold and thus pay 22 percent tax on any income up to K18,000, but pay tax at the same rate as residents above that. Businesses similarly pay tax on income earned in the calendar year. Those businesses incorporated in PNG pay tax at the rate of 30 percent on income earned across the world in the calendar year while non-resident companies pay tax on income earned in PNG but at the rate of 48 percent. Companies engaged in mining, petroleum and gas may also be liable to additional taxes in the form of dividend withholding tax and additional profits tax.

The powers of taxation are shared between the ABG and the PNG government as specified under sections 137–148 of the Financial Arrangements of the BPA. The PNG government collects all income taxes (i.e. from individuals and businesses), VAT and any withholding taxes as required under the national laws. All income taxes and the VAT are collected by the IRC on behalf of the PNG government. The IRC employs the Standard Integrated Government Tax Administration System (SIGTAS), first rolled out in 2013, to manage compliance with taxes for which it has jurisdiction, and for collection of revenues. As part of its compliance checks, the IRC collects data from registrations, lodgements and payments that are made at the national level. Compliance with the tax laws are enforced through the imposition of penalties by the IRC. For Bougainville, the IRC reported

that 504 corporate taxpayers and another 1,029 individual taxpayers were registered as of 2017.

The IRC is able to generate reports from its own records to track payments made by businesses and individuals from Bougainville as against the rest of the nation, and this information is used to account for and the transfer of funds to the ABG. Taxes collected from the ARB are paid into three separate trust accounts; namely: (1) ABG Company Income Tax Account; (2) ABG Personal Income Tax Account; and (3) North Solomons Provincial VAT Account. These revenues are then apportioned as per agreement within the BPA. Specifically, the ABG gets 30 percent of the VAT generated within Bougainville, 100 percent of the personal income taxes collected from Bougainville, plus any other associated withholding taxes. The balance of 70 percent of VAT, together with all company income taxes and any customs duties accruing to Bougainville, are set aside to be made available to the ABG when fiscal self-reliance is achieved.

### **2.2.3 ABG introduced revenue tax measures**

The ABG has powers to set its own taxes including on the sale of alcohol and cigarettes, fees for registration of motor vehicles, and grants of mining leases. However, compliance with the ABG's own tax laws is poor, with reports of most businesses not paying taxes for extended periods of time (Department of Foreign Affairs and Trade [DFAT], 2020). This non-compliance is due to a combination of the limited capacity within the ABG to administer the taxes, the lack of information for enforcing compliance by businesses, and the poor connectivity between the Tax Office in Buka with businesses located in Arawa and Buin.

In summary, PNG has a mature tax system that demands considerable capacity and information for its administration. The ABG benefits from the IRC in the administration of the tax system through close collaboration between its own Tax Office and the IRC. Such collaboration may be necessary for the efficient administration of taxes regardless of the political future that Bougainville is granted.

## **2.3 Existing sources of revenues for Bougainville**

The sources of revenues for the ABG are stipulated within the financial arrangements contained in the BPA. These arrangements were put in place to provide the resources to allow Bougainville to rebuild its economy. The arrangements include the division of powers to tax production between the two jurisdictions, transfer payments in the form of grants from the PNG Budget to the ABG, the delegations given to the ABG to borrow and access foreign grants, and for fiscal accountability. These arrangements are explained briefly below with a view to explaining possible reforms for the future.

At the time of the signing of the BPA in August 2001, there was a belief among the signatories that the domestic economy of Bougainville would rebound quickly following the resumption of copper and gold mining at the dormant mine. In anticipation, temporary transfers in the form of recurrent, restoration and development funds, and conditional grants were mandated from the national budget to the ABG. It was also agreed that:

*Bougainville will continue to make a fair contribution to National Government costs – before fiscal self-reliance, through the National Government retaining control over company tax, Value Added Tax and customs duties in Bougainville; and after self-reliance, through a revenue-sharing formula. (BPA, 2001, s. 135).*

However, any of the additional costs of establishing and sustaining the autonomy arrangements were to be shared between the ABG and the PNG government (BPA, 2001, s. 136). The ABG was to share in the costs of national provisions such as defence and border security but after having achieved fiscal self-reliance, which was deemed to be reached in the year in which revenues from company tax together with a 70 percent share of VAT and customs duties were equal to the value of the recurrent grant provided from the PNG Budget (BPA, 2001, s. 137). The IRC has until now taken responsibility for collection of all income taxes and VAT, while the ABG collects sales taxes on beer and cigarettes, liquor licence fees, housing rentals and fees from the grant of mining exploration licences.

Contrary to the expectation of a quick rebound in the economy of Bougainville following the signing of the

BPA, the ABG has continually relied on grants from the PNG Budget for services provided in Bougainville. As of 2020, and as explained above, some 84 percent of the ABG recurrent budget was funded via grants from Waigani. The lack of progress in achieving fiscal self-reliance by the ABG may be due as much to the outcomes from the conflict in terms of poor physical and social infrastructure in the ARB, and the design of transfer arrangements from the budget. On the latter point, the incentives for the ABG to reach fiscal self-reliance have been weak. Specifically, the guaranteed transfers from the PNG government to the ABG Budget, as mandated by the BPA, may have reduced the need for the ABG to expend effort in growing its own revenue base (Chand, 2018).

The BPA included provisions for fiscal accountability where both the PNG government and the ABG retained the right to audit taxes collected on their behalf, and the trust accounts. These arrangements have not worked efficiently as disputes have arisen frequently between the PNG government and the ABG over the quantum of grants and the timeliness of their release (see Chand, 2018). Consequently, these arrangements will need to be overhauled with a view to the ABG funding the bulk, if not all, of its own budget. Such a shift is taking place more broadly in PNG as subnational governments are increasingly being required to balance their recurrent budgets.

The potential sources of revenues for the ABG, and its prospects for raising revenues for the budget are explained next. Among the existing taxes and other revenue sources that operate in Bougainville are:

1. VAT and indirect taxes;
2. Income taxes;
3. Resource rent tax;
4. Debt, including concessional loans to fund public investments; and,
5. Foreign aid.

Each of the above-mentioned revenue sources is considered in terms of the prospects for raising revenues. VAT collections as transferred by the IRC accounted for some 2 percent of the total revenues raised in 2019 (see Table 2.3) but may have the potential to raise much more. This is because the value of production in Bougainville is estimated at one billion kina, but the bulk of this falls outside the tax base as it arises from subsistence production. The shift to production and sale through the formal sector will broaden the tax base but this will take time.

**Table 2.3: Internal Sources of Revenue for the ABG, 2018–2020**

|     | <b>Source</b>  | <b>2018</b>       | <b>2019</b>       | <b>2020</b>       |
|-----|--|-------------------|-------------------|-------------------|
|     |  | <b>K</b>          | <b>K</b>          | <b>K</b>          |
| 1.  | Bougainville Group Tax                                       | 20,000,000        | 20,000,000        | 23,000,000        |
| 2.  | Goods & Services Tax   | 200,000           | 500,000           | 500,000           |
| 3.  | Liquor Tax   | 100,000           | 200,000           | 200,000           |
| 4.  | Tobacco Tax  | 50,000            | 100,000           | 100,000           |
| 5.  | Motor Vehicle Registration & Inspection Fees                 | 500,000           | 500,000           | 500,000           |
| 6.  | Liquor Licensing Fees  | 100,000           | 100,000           | 100,000           |
| 7.  | Housing Rentals  | 50,000            | 50,000            | 50,000            |
| 8.  | Sundry   | 100,000           | 100,000           | 100,000           |
| 9.  | ABG Mining Dept (Exploration Licenses)                       | 200,000           | 50,000            | 50,000            |
| 10. | NFA Tuna Royalties   | –                 | –                 | 5,000,000         |
| 11. | Motor Vehicle Allowance Deductions (Ministers & Secretaries) | 888,000           | 888,000           | 890,000           |
|     | <b>Total</b>   | <b>22,188,000</b> | <b>22,488,000</b> | <b>30,490,000</b> |

**Source:** Department of Treasury and Finance, ABG.

## 2.4. Tax administration potential and considerations

Administration of indirect taxes demands local capacity and timely information for ensuring compliance – both of which are in short supply within Bougainville and are likely to remain so for the short to medium term. Consequently, any tax system for Bougainville would have to take into consideration the limited domestic capacity for administration and the potential benefits from cooperation with the IRC. As far as the design of the tax system is concerned, a uniform rate of import duty that is collected at the ports of entry could be simple to administer. However, a disadvantage of a uniform and broad-based import duty is that it raises costs of exports, which in turn could place Bougainville at a disadvantage compared to the rest of PNG. As an example, a cocoa producer in Bougainville will pay tax for the import of inputs while her counterpart in East New Britain will not; unless they are not registered for VAT, which may be the case for most smallholders. This disadvantage may be offset through a system of duty-drawbacks that provide a concession on import duties for inputs used for exports; but again, this will demand more sophisticated administration. Smallholders not registered for VAT could, for example, be granted imputation credits for purchase of imported inputs.

Income taxes may also raise revenues for the ABG. Taxes on income of individuals and companies have been imposed in PNG, including Bougainville. The Bougainville Group Tax, which is a withholding tax on the payroll of formal sector workers, and income tax for companies are both collected by the IRC and paid to the ABG, as explained in the Introduction. The Bougainville Group Tax has to date raised the bulk of locally sourced revenues for the ABG Budget. Its contribution to the budget will rise with growth in formal sector employment in Bougainville such as that from a recommencement of large-scale mining. Tax on company income, however, is more difficult to collect, given that many corporations straddle across PNG and sometimes internationally. The IRC has to date collected income taxes from businesses operating in Bougainville, and this support may be helpful in the transition to the Bougainville Tax Office taking over this responsibility.

Resource rent taxes are possibly the most optimistic sources of revenue given the rich tuna fisheries in the surrounding waters and the known rich mineral resources of Bougainville. The potential for tuna and mineral rents to contribute towards the ABG Budget is discussed in the next chapter. Resource rents entail risks of a ‘Resource curse’ and potential ‘Dutch disease’ consequences, but there are possible means to mitigate both these risks.

The ABG may borrow, both locally and from abroad, to fund its own budget deficits. The existing autonomy arrangement allows borrowing to fund budget deficits, but under strict conditions. The ABG may raise debt domestically in compliance with the regulations set by the Central Bank (BPA, 2001, s.165), and from abroad with the approval from the Central Bank (BPA, 2001, s.166) following consultation with the PNG government (BPA, 2001, s.164). Any proposed budget deficits, however, require advance approval from the PNG Treasurer (BPA, 2001, s.167). A politically independent Bougainville will not be constrained by the existing arrangements and initially may have the fiscal space to borrow when starting from a position of low debt. Funding from concessional sources including foreign aid may be sought for investments in public infrastructure.

## 2.5. Policy implications

Some of the policy implications from the discussion above about raising revenue for the ABG budget over the short-to-medium term are examined next. These include means to improving tax effort, raising receipts from the PNG Budget, options for harvesting more taxes from an improved tax base, and from future mineral taxation. Finally, some of the governance challenges in raising revenue for the ABG budget are explained.

*Tax effort*, defined as the tax collected by the government as a proportion of the value of goods and services produced domestically, is low; meaning that there is headroom for increased collection. Preliminary estimates from Chand (2018) are that Bougainville produces some one billion kina of goods and services within a year. Maintaining the VAT rate of 10 percent therefore has the potential to raise K100 million, but doing so is difficult for a combination of reasons, including that a large share of output is generated within the informal sector and thus falls outside the tax net. The very nature of subsistence production means that it is not marketed; thus,

it is neither reflected in personal income nor accrues VAT. Besides, company and personal income taxes are collected by the IRC. There are reports of businesses unable to pay taxes, and the lack of compliance by some, which in turn may be due to inaccessibility of information. Consequently, the Bougainville Tax Office has the task of outreach, information dissemination and compliance enforcement to increase collections. Closer collaboration with the IRC for strengthening of capacity and more effective administration of the taxes are critical. We recommend a study to review present arrangements and propose a new tax administration system for consideration and agreement for the post referendum government arrangements.

The mechanisms for *fiscal transfers* from the PNG government to the ABG are likely to be renegotiated as part of the transitional arrangements towards the final political settlement. The PNG Budget for 2020 has appropriated K50 million towards the Restoration and Development Grant (RDG), and a further K188 million towards the Public Investment Program (PIP), including a commitment of K50 million from the Prime Minister (see Table 2.4). In addition, the PNG Budget has appropriated another K151 million towards recurrent expenditures, as shown in Table 2.5. This support would have to be sustained over the short term if service delivery in Bougainville is not to suffer, but the prevailing levels of support are unlikely to be sustained indefinitely. Depending on the political outcome agreed to, transitional arrangements to allow the ABG to fund a greater share of the recurrent and development budgets will be necessary.

**Table 2.4: National Public Investment Program (PIP) Appropriations for 2020**

|     | <b>Grant</b>  | <b>Value (K)</b>   | <b>(% of total)</b> |
|-----|---|--------------------|---------------------|
| 1.  | Provincial Support Improvement Program (PSIP)         | 10,000,000         | 5.3%                |
| 2.  | District Support Improvement Program (DSIP-ABG)       | 30,000,000         | 16.0%               |
| 3.  | Bougainville Programming                              | 30,000,000         | 16.0%               |
| 4.  | Bougainville Infrastructure                           | 50,000,000         | 26.6%               |
| 5.  | Peace   | 5,000,000          | 2.7%                |
| 6.  | Prime Minister's Commitment                           | 50,000,000         | 26.6%               |
| 7.  | Wakunai: Togarau Road                                 | 5,000,000          | 2.7%                |
| 8.  | Sira Koropovi Trunk Road                              | 3,000,000          | 1.6%                |
| 9.  | Hakau: Pateave Tearouki Road                          | 5,000,000          | 2.7%                |
| 10. | Community Government (Ward) Support Improvement Prog. | –                  | 0.0%                |
| 11. | ABG Special Intervention Program (SIP)                | –                  | 0.0%                |
|     | <b>Total National PIP</b>                             | <b>188,000,000</b> | <b>100.0%</b>       |

**Source:** Department of Treasury and Finance, ABG.

**Table 2.5: PNG Government Recurrent Grants, 2018–2020**

|   |  | <b>2018</b>        | <b>2019</b>        | <b>2020</b>        |
|---|--|--------------------|--------------------|--------------------|
|   |  | <b>K</b>           | <b>K</b>           | <b>K</b>           |
| A. Recurrent Unconditional Grant        |  | 17,550,800         | 28,250,800         | 28,251,100         |
| 1.                                      | ABG Goods & Services Grant               | 15,050,800         | 25,750,800         | 25,751,100         |
| 2.                                      | ABG Chief Collector of Taxes             | 2,500,000          | 2,500,000          | 2,500,000          |
| B. Recurrent Conditional Grant          |  | 99,907,800         | 113,738,900        | 122,712,900        |
| 1.                                      | Staffing Grant (GoPNG)                   | 28,492,100         | 29,346,800         | 30,313,500         |
| 2.                                      | Teaching Service Commission              | 52,623,700         | 65,034,000         | 67,476,500         |
| 3.                                      | Public Servants Leave Fares              | 465,000            | 465,000            | 480,300            |
| 4.                                      | Teachers Leave Fares                     | 2,400,000          | 2,966,000          | 8,515,500          |
| 5.                                      | ABG Parliamentary Services Allowances    | 8,244,000          | 8,244,000          | 8,244,000          |
| 6.                                      | ABG Community Auxillary Police Allowance | 1,562,000          | 1,562,000          | 1,562,000          |
| 7.                                      | ABG Electoral Commission Allowance       | 1,904,200          | 1,904,200          | 1,904,200          |
| 8.                                      | Police Goods & Services Grant            | 3,815,500          | 3,815,500          | 3,815,500          |
| 9.                                      | National Functions and Powers            | 401,300            | 401,400            | 401,400            |
| <b>Total Recurrent Grants: National</b> |  | <b>117,458,600</b> | <b>141,989,700</b> | <b>150,964,000</b> |

**Source:** Department of Treasury and Finance, ABG.

The Prime Minister has expressed his desire to give economic independence to Bougainville, and these sentiments have also been expressed by leaders in Bougainville (as explained in Chapter 1). A necessary requirement for economic independence is for the ABG to be free of the need for support from the PNG Budget. This freedom is likely to be gained over time (as explained in Chapter 3), beginning with an increasing reliance on internally sourced revenues to fund the recurrent budget before moving to the development budget.

## Ch.3 Potential sources of revenue—Expanding the tax base by growing the economy

Bougainville has several opportunities to expand its revenue base, but these come with challenges. The short-term opportunities from growth of agricultural output, particularly cocoa for export, is considered first; followed by the opportunities to expand fishing and boutique tourism. Given the potential for mining as a source of growth for the economy and revenues for government, a separate section is devoted to how revenues from sale of public (largely mineral) assets may be managed.

### 3.1. Cocoa

Bougainville covers a total area of approximately 8,788 square kilometres, with an estimated 332,000 hectares considered suitable for agriculture. From the 1980 Census, it was estimated that there were 15,792 smallholder cocoa growers cultivating 18,035 hectares of cocoa, and 9,186 smallholders cultivating 34,285 hectares of coconuts. However, most cocoa areas were intercropped with coconuts (Lummani, 2015). Cocoa production is said to support directly about two-thirds of the Bougainville population. About 87 percent of the population is engaged in agriculture, either as smallholder commercial farmers or on privately run household plots.

In 1988, prior to the crisis, cocoa exports were 30,000 tonnes. Cocoa output suffered during the crisis but had recovered to a level of 26,000 tonnes in 2009, when the cocoa borer devastated production and reduced output to 13,000 tonnes. The output decline was aggravated by the fact that the cocoa tree stock is aged. By 2014, cocoa exports had recovered, with 23,000 growers selling to four major exporters to the tune of K68 million.

Aside from the difficulties faced by the smallholder cocoa industry, cocoa production is said to suffer from poor access to support services, limited labour availability, and inefficient cocoa supply chains. To counter these problems, the Australian Government, through the Australian Centre for International Agricultural Research (ACIAR), funded a five-year program for the period 2016 to 2021.<sup>3</sup> Through the ‘Commodity Support Facility’ 26 cocoa farming groups of smallholders were formed across Bougainville. Each group comprises 50 farmers, and grants have been provided to improve the quantity and quality of cocoa produced. Part of the research and extension effort is to increase the adoption of cocoa clone seedlings more resistant to the cocoa pod borer and to improve the cocoa supply chain.

It is estimated that Bougainville could triple its output with better access to quality hybrids, better management of the cocoa pod borer pest, and increased technical assistance (i.e. to increase yields from the current 200–500 kg/ha to 1,500 kg/ha). But this would only bring yields back to where they were at the peak. Still, there is some expectation that yields could increase six-fold. The Commodity Support Facility expects that over the period 2021–25 additional farmer income from the improved cocoa production will be around K32 million. Hence, additional income per farm household would be around K2,300 in 2021 and rising to K12,800 p.a. by 2025.

As noted above, one of the problems afflicting cocoa revenues is the inefficient supply chains. A particular problem is that buyers and exporters of cocoa largely do not grade and sell cocoa by quality. This practice is said to restrict the quantity of good quality cocoa sold into higher value markets. The ABG and the Government of PNG have collaborated to develop policy frameworks for regulation of agriculture and fisheries. Under the proposed arrangements, cocoa exporters will be required to register with the Department of Primary Industry (DPI), but not to hold a formal licence. Gazetted DPI officers will undertake quality inspection and enforcement.

### 3.2 Tuna fisheries

The rich and fertile tuna-fishing grounds that fall within the waters of Bougainville already earn licensing fees from distant water fishing nations for PNG. Preliminary estimates of the contribution licencing fees raised

<sup>3</sup> ACIAR, ‘Developing the cocoa value chain in Bougainville’, Project Leader David Guest, University of Sydney. (Budget: A\$5,994,990, Feb. 2016 to Dec. 2021).

from distant water fishing nations (DWFN) could make to the ABG budget range from K30 million to K130 million annually, depending in part upon the licence fees paid under the Vessel Day Scheme now in place (see Chand, 2018)—this is a lot more than the K5 million that ABG was allocated from the PNG National Fisheries Authority (NFA) in 2020. Securing these payments, however, will require collaboration with and support from the PNG government.

Under the BPA (s.86) the fishing licence revenues have to be shared between PNG and Bougainville according to the agreed formula, which is still to be negotiated; although it has to be expected that tuna receipts will vary significantly from year to year as tuna harvests and tuna prices are very variable.

### 3.3. Tourism

Bougainville has considerable natural beauty and extensive war relics from the World War II. General Yamamoto of the Japanese Imperial Army was killed in south Bougainville when his aeroplane was shot down there. A few Japanese tourists visit the site, and the school nearby is named after the General. Besides, many Americans, Australians, Indians and Pacific Islanders were killed in Bougainville during the war, and their involvement would attract visitors from abroad. Consequently, prospects for the growth of boutique tourism to serve these niche markets around war relics and game fishing are significant. But Bougainville needs better connectivity, improved transportation and accommodation, and greater personal security for growth of tourism.

The role tourism may play in the growth of the economy is elaborated in the next chapter.

### 3.4. Sale of public resources

Bougainville has large, known deposits of copper and gold that were being mined before the suspension of the operations of Bougainville Copper Limited (BCL) in 1989. These deposits may be accessed but doing so will require significant and sustained foreign direct investment that to date has been difficult to attract. An immediate challenge, and one that extends beyond minerals, is that of managing revenues from the sale of assets that belong to the public to fund services for the benefit of the wider community, including those yet to be born. It is this issue that we turn to next.

The effective management of the revenues from the sale of public resources such as minerals, forestry and fishing has long been a challenging problem for developing countries. Much of the discussion about this issue has been on the forms of the holding of the revenues, usually by the government. However, it is important to note that the primary management problem has been with the effective expenditure of the resource revenues. That is, it is one thing to have effective control over the revenues going into, say, a trust fund; it is quite another thing to spend the money effectively. Complicating the choices further is a decision on the proportion to spend for the benefit of the current generation versus that to save for those yet to be born. Indeed, the latter has been a fundamental problem in Papua New Guinea, where resource booms have been followed by excessive expenditure and fiscal deficits (Batten et al., 2009).

#### ***3.4.1. Challenges for governance and management of revenues from public resources***

A major issue for discussion in Bougainville should be on whether institutional arrangements can be devised that will ensure that the resource revenues collected by the independent government in the future—from, say, fishing, forestry, or mining—will be spent effectively. It is not feasible that the revenues be locked away for future use, such as in Norway where the State Petroleum Fund is to be used to provide incomes for retirees. Bougainville needs to see that resource revenues go towards the development of its physical and human capital that provide lasting benefits to the living over the indefinite future. Can institutions or mechanisms be established that will ensure that we will see much better government use of resource revenue inflows than has been observed in most developing countries since independence? We are doubtful that such mechanisms will be found.

The management of resource revenues in developing countries—and, indeed, in some high-income countries—has not been a happy one, with a few exceptions. Waste, corruption, macro-economic instability, civil conflict and distortion of political processes have widely accompanied the flows of these revenues. As a Working Paper

from the Center for Global Development (Moss & Young, 2009) has argued, the reason that Botswana—the country with the highest per capita growth rate in the world between 1965 and 1998—managed to use the large revenues from its diamond exports to underpin this growth is because there is a strong political constituency (the cattle industry) supporting effective use of these revenues. Chile, Indonesia and Malaysia were also given as examples of countries where good use has been made of mineral and oil revenues. It can be argued, however, that in these three cases the countries had what can be called ‘strong and stable governments’ that had a keen (and lasting) interest in the widespread development of the economy and were able to resist narrow vested interests.<sup>4</sup>

The other really interesting cases that Moss and Young (2009) raise are Alaska and Norway. Moss and Young argue that in these cases the oil and gas revenues are well managed because there are strong political constituencies protecting the funds. In Norway’s case, the political constituency is the increasing number of retirees depending on the good management of the State Petroleum Fund – indeed, potentially all of Norway’s population is involved as they all look forward to retirement.

In Alaska’s case, the Alaska Permanent Fund (APF) was set up to collect and invest revenues from Alaska’s oil exports. The APF must be invested outside Alaska, and its purpose can only be changed by changing the State’s Constitution. The earnings from the APF’s investments are distributed quarterly and on an equal basis to all Alaskan citizens. Thus, all citizens have an interest in protecting the APF, and it is said that it would be ‘political suicide’ for any politician to suggest changes to its management.

The many examples of developing countries that have not been able to manage resource revenues effectively do not have a political constituency with an interest in protecting the revenues from corruption, waste, and so forth. Presently, Bougainville does not appear to have such a constituency. Is it possible that it can develop one? This question must be answered in the affirmative before it can be assumed that refinements of the way in which resource revenues are made available to the government will be viable. If Bougainville is to adopt a policy of this kind, the nature of politics dictates that it should be done as soon as possible. *Otherwise, if an alternative policy is adopted at the start, it will prove almost impossible to introduce a change later.*

Many in Bougainville have argued that the mineral resources in the region belong to the wider community due to the fact that widespread devastation of life and property was caused by the conflict that was ignited at the Panguna Copper and Gold mine. Conflicts in Melanesia over resources have been a persistent feature, as well as the means of managing and resolving these across communities (Banks, 2008). The conflict at Panguna that engulfed the whole of Bougainville and raged for a decade points to the fact that the traditional mechanisms to resolve it failed.

Conflicts in Melanesia have a history, with past conflicts leading to new conflicts as new differences emerge. Some of the disputes from the civil war are slowly being settled through traditional mechanisms, including the use of compensation. Compensation as a means to resolving conflicts is common throughout Melanesia, and it is a concept that is familiar to many (Akin, 1999). Consequently, compensation payments may be extended both across space and over time in the ARB to build and bind relationships across communities who may have been torn apart by the civil war. Importantly, the proposed compensation could be funded with rents generated from any future mine, thereby reflecting the value of the public asset liquidated.

There are at least four significant advantages from using compensation funded from mineral rents within contemporary Bougainville: first, it is a concept familiar to the population; second, it has the potential to consolidate peace across communities; third, it can create a political constituency for better governance; and last, it can boost economic activity, leading to increased revenues for the ABG budget. Furthermore, a continuous stream of payments across the entire population linked to proceeds from a mine has the potential to improve governance by focusing the attention of the recipients towards maximising returns from publicly owned assets.

### **3.4.2. Lessons from the Alaska Permanent Fund model**

On governance and economic output specifically, we believe that the Alaskan model (see above and below, and

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<sup>4</sup>In the light of recent events in Malaysia, its reputation for strong governance has been tarnished.

Moss and Young, 2009) may be adapted to suit the cultural and historical contexts of Bougainville. We believe that the implementation of the Alaskan model in Bougainville would develop a widespread constituency for the good management of the invested funds while reducing the funds available for misuse by the public sector. For example, if one-half of the income earned on the invested mineral rents were to be distributed equally on a regular basis across the population while the remainder is used to fund public services through the budget, this would create a strong incentive for the public to track the efficacy of public expenditure. It should also develop a strong public interest in government expenditure generally, as the public would be aware of the quantum of mineral rents withheld by the ABG and also from paying taxes in the form of VAT from the expenditure of their share of the dividends. Where the public has little relationship with government revenues, as with resource revenues paid directly to the government, there is little insistence on public accountability, leaving considerable room for corruption (Ross, 2003). From cross-country analysis, a tax-paying public can be expected to have a closer interest in how its taxes are used.

It is important to note that the payment of APF dividends to all Alaskans has had strong benefits for the economy, with people saving a large proportion of the quarterly payments that, in turn, feeds into investment and economic growth. This behaviour contrasts significantly with the widespread behaviour of developing country governments' use of resource revenues, which are often used for unsustainable recurrent expenditures (see Duncan, 1995).

It is quite likely too that the distribution of such funds to all citizens of Bougainville on, say, a quarterly basis would lead to increased agricultural and rural productivity, which would have flow-on benefits to the whole economy, as it did in the fast-growing, land-abundant East Asian economies such as Malaysia, Thailand, Indonesia and Vietnam (see Duncan, 2007). The flow of dividends to the bulk of the Bougainville population in the rural areas would provide them with access to capital that they currently do not have; and would give them the capital to develop their farming and other informal, cash-earning activities. As Duncan (2007) noted, early, rapid agricultural productivity growth in countries such as Malaysia, Thailand and Indonesia laid the basis for their sustained, broad-based, economic growth.

Would the Alaskan model be technically possible in Bougainville? This is an issue that requires in-depth analysis, but our initial assessments are favourable. The adoption of the Alaskan model rests on the proposition that natural resources underground belong to the entire community rather than those who sit immediately atop. Such a proposition would be easier to adopt throughout the population before resources are discovered, since this veil of ignorance regarding the spatial distribution of mineral resources allows the population to diversify their risk of being left bereft of any valuable deposits underground of their custom land in future. Consequently, this model could be adopted for any future resource discoveries. Using the model for known deposits such as that of Panguna is tricky as it requires agreement of the landowners owning the resource. Panguna is the lone case in this regard, and as explained earlier, the conflict has extended the claims of the wider population to this resource. Bougainville, therefore, has the unique opportunity to experiment with an adapted version of the Alaskan model.

How about the costs of implementing the proposed model? Distributing resource rents directly to every Bougainvillean is practical, and can have additional benefits too. The extensive coverage of mobile phones in Bougainville and the increasing use of mobile phone for banking allows for such transfers at little cost. All that is necessary is a database of the owners that in turn is linked to the register of births. The additional benefits from direct transfers of dividends from mining linked to the registration of births and deaths will be in terms of access to real-time data on the demographics, whereby the recipients have an incentive to keep their register current. This could also lead to improved information collected from the Census and improved electoral information. Further, the collected and clan-referenced data at birth could assist in the adoption of a system for the secure, long-term leasing of custom land, with its need for registration of all members of the clan. It will have synergy with a system for the registration of all Bougainville citizens for the population-wide distribution of resource rent dividend payments.

The concept proposed above would have to be fleshed out in finer detail after the basic tenets have been agreed to.

### 3.5 Policy considerations

The investments that are necessary to grow the tax base for the ABG require large and lumpy investments upfront. They also require capacity to plan, budget, execute and monitor the public investments: Bougainville falls short on each of these requirements. And absent such large and lumpy investments early, Bougainville will not be able to acquire fiscal independence. In short, the ABG will need foreign funds and expatriate expertise to create the conditions for a gradual transition to economic independence. Most of all, Bougainville will need visionary leadership and considered support from the PNG government. There is hope on both these fronts.

Bougainville is rich in natural resources that can be used to attract foreign investments for technology transfer, capital injection, employment generation, market access and exports. Several distant water fishing nations are already operating in the waters of Bougainville. Attracting a foreign investor to engage in onshore tuna processing, as undertaken in Wewak on the mainland and across in the Solomon Islands, has the potential to generate much needed formal sector employment (see Chand, 2018). Richer still are the known mineral deposits that have the potential to attract foreign investment. But doing so will be tricky given the history of Bougainville Copper Limited, and the issues of the compensation for the environmental damage done and compensation for the decade-long conflict. Leadership and meticulous planning will be necessary to navigate these obstacles to restarting mining that could boost revenues for the budget, and provide appropriate returns to the people who ultimately own the resources (elaborated upon in Chapter 3, Section 3.4).

A start could be made to attracting foreign direct investments into Bougainville by addressing the following:

1. Implementing land administration systems and town planning;
2. Improving security of contracts, including to land titles, mining leases, and to future income arising from private investment;
3. Lowering sovereign risk with regard to investments in Bougainville vis-à-vis the rest of PNG.

On the first issue, the recent attempt at land reform in PNG, in the form of the National Land Development Program, has lessons for Bougainville—both positive and negative—on how best to access natural resources under customary ownership for private enterprise. The land in urban centres in Bougainville has been developed, albeit without careful planning. Drawing these developments into a formal registry, using the data for planning, and the issuing of titles that then may be used as collateral to access finance from banks can raise private investment. Both personal security and that of contracts would be necessary for the titles to be bankable, and for the cost of finance to be competitive (Chand, 2015). The ABG can draw down all powers in relation to administration of land, and these powers may be used for planning urban developments, to improve access to land for private enterprise, and to create the requisite information on ownership of land by customary groups.<sup>5</sup>

Investments, by their very nature, generate returns over the life of the asset. A public motor vehicle (PMV) that costs hundreds of thousands of kina, for example, pays itself off over several years. Generally, the larger the investment, the longer it takes to pay it off. Mining projects often require billions of dollars in upfront investment, take years to plan and operationalise, and decades to generate the income that warrants the investment in the first place. Consequently, the security of the income for the life of a prospective mine is critical to attracting an investor. And even when on the ground, an investor will choose the level of investment depending on the time horizon; if unsure of the length of tenure, the investor will engage in ‘high-grading’ and ‘fly-in-fly-out’ operations. The proportion of benefits that may be captured by the people of Bougainville rests on three necessary conditions: (1) the richness of the resource; (2) the risk assessment of the investor; and (3) the level of competition for the resource. Panguna deposits satisfy the first of these requirements, but the last two depend on the policies of the ABG.

Finally, perceptions of poor governance would be likely to shortchange Bougainville of its economic potential, and the ABG of fiscal independence. The absence of good governance remains a significant impediment to

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<sup>5</sup> Fiji has such a database that is linked to the register of births and deaths, and thus may provide a model for Bougainville.

growth of private enterprise. There have been frequent allegations of corruption and misappropriation of public funds by the ABG (see DFAT, 2020 BP Outcome Report). A survey of investors administered by the Department of Economic Development (DED) in September 2019 revealed that corruption and access to finance were the major impediments to local investment (DFAT, 2020).

Lack of capacity within the ABG has compounded the problems emanating from poor governance. Capacity constraints in basic budgeting, fiscal management and effective administration have impeded public enterprise. The Department of Treasury and Finance, for example, has been reported to lack capacity to manage the budget; meaning that claims processing and reporting obligations are not met while budgeted expenditures are reallocated based on directions from politicians (DFAT, 2020).

Finally, there are the challenges of mitigating the adverse effects of ‘resource curse’ that entails the rent-seeking fostered through mineral wealth and that of a ‘Dutch disease’, which follows an appreciation of the real exchange rate that then retards the competitiveness of other export industries. Norway is among only a few countries that has been successful in investing its resource rents from exports of natural gas into an endowment fund that then releases a steady level of revenues/income to the national budget.<sup>6</sup> Botswana has achieved similar success with the management of its diamond exports through an external escrow account. An alternative resource management regime is the Alaskan-type scheme detailed above. In this case, revenue flows to the government in the form of VAT on private consumption and investment mainly flows from the private sector.

The next chapter provides a comparative perspective of how small island economies throughout the world have performed, to see what lessons can be applied in the case of Bougainville.

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<sup>6</sup> See article titled ‘The departing boss of Norway’s oil fund on building an asset manager’ on the Norges Bank Investment Management (NBIM) in *The Economist* of 4 April 2020, ([https://www.economist.com/finance-and-economics/2020/04/04/the-departing-boss-of-norways-oil-fund-on-building-an-asset-manager?utm\\_campaign=the-economist-today&utm\\_medium=newsletter&utm\\_source=salesforce-marketing-cloud&utm\\_term=2020-04-07&utm\\_content=article-link-3](https://www.economist.com/finance-and-economics/2020/04/04/the-departing-boss-of-norways-oil-fund-on-building-an-asset-manager?utm_campaign=the-economist-today&utm_medium=newsletter&utm_source=salesforce-marketing-cloud&utm_term=2020-04-07&utm_content=article-link-3))

# Ch.4 Lessons from small island states around the globe

## 4.1. Why look at what other small island states are doing?

Bougainville is a small island economy where conventional economic thinking about raising economic growth and peoples' living standards may not necessarily apply. Consequently, an analysis of the experience of small island states around the globe is important to inform policy makers and provide guidance on the design and implementation of policies for economic development, including the revenue systems of government.

As such, this part of the report analyses the way in which small island states across the globe have developed, and so provides an evidence-based framework for understanding what path the Bougainville economy may take in the future. Despite the immense challenges associated with geographic isolation, small and spatially dispersed populations, and a small land area, there are numerous examples of small island states that have grown their economies and improved health and educational outcomes for their people. At the same time, there are many others that have muddled along as low-income states with poor socio-economic outcomes.

There are 57 small island states scattered across the world's oceans. Of these, 27 are aligned with a wealthy metropolitan nation and, suffice to say, all of them are either middle- or high-income economies (Group 4 states, see Figure 4.1). Neighbouring Noumea is a good example, as are American Samoa and Cook Islands. It is notable that these three Pacific states have vastly different arrangements of autonomy and are associated with different metropolitan nations.

The common theme among these aligned states is that they derive the following from their metropolitan partners: (1) free labour mobility, (2) public transfers, (3) private transfers (including social security and subsidised education and health), and (4) economic integration and linkages. In most cases, these economic connections have provided a platform for a thriving tourism export sector. If Bougainville were to follow an arrangement of alignment with PNG, there could be benefits under all four of these categories, but nowhere near the scope seen among aligned states elsewhere across the globe. There is therefore not a lot for Bougainville to learn from these countries—particularly as 16 of them are tiny microstates with populations below 100,000.

There are a further eight microstates among the remaining group of 30 independent small island states (Group 3 states, see Figure 4.1). For Bougainville, there may be some lessons to be found among these nations, but not a lot. All of these states have tiny land masses, a small fraction the size of Bougainville; five are middle-income, tourism-based economies with established linkages with tourism source countries; three have no tourism and generate very little economic activity. Among these states, Nauru offers the most important lessons for Bougainville. It is a country that found economic success through mining; followed by economic bankruptcy through misuse of mining proceeds. If Bougainville were to ever develop a mining industry, it should look no further than the experience of Nauru for lessons on how not to do things.

Four of the remaining 22 independent small island states have high-income status (Group 2 states, see Figure 4.1). What sets these states apart is that they are the only states among these 22 that are not geographically remote from wealthy OECD countries. As such, each of these countries—Bahamas, Cyprus, Iceland and Malta—have established close economic and social integration with neighbouring OECD countries. In contrast, Bougainville is both poor and geographically remote and will need to move a long way down the path of economic development before it can derive lessons from these states.

It is the balance of 18 countries classified as Group 1 small island states in Figure 4.1 from which Bougainville can derive lessons. These countries have an average land area of 5,250 km<sup>2</sup> and an average population of 504,000. The land area of Bougainville is well above the average at 9,320 km<sup>2</sup> and its population of 234,000 is well below average. With the exception of Timor-Leste, all of these countries are geographically remote, lying more than 1,000 km from the nearest OECD country. Although physically closer to Australia, the limited connectivity

implies that Timor-Leste is well isolated from any population centres in Australia. Four of these states are in the Indian Ocean, five are in the Caribbean region of the Atlantic Ocean, two are elsewhere in the Atlantic, and seven are in the Pacific.

In common with Bougainville, the Group 1 small island states face immense challenges of geographic isolation in conjunction with a far from ideal population scale for building a viable state and supporting public sector. What makes an analysis of these Group 1 states so interesting for Bougainville is that there is a wide diversity of success in economic development. As will be elaborated upon below, the economic core of the 18 Group 1 states may be broken down to (1) agriculture, (2) tourism, (3) mineral resources, and (4) remittances.

Figure 4.1: Classifying the globe's small island states.



Source: Data derived from the UNdata website, <http://data.un.org/default.aspx>.

## 4.2. Small island states that look like Bougainville

Bougainville is unambiguously a low-income state. In this sense it shares close parallels with four other states in Group 1—Comoros, Kiribati, Sao Tome and Principe, and Solomon Islands—each of which generate less than US\$2,000 in GDP per person. Like Bougainville, these countries have economies dominated by the agriculture, forestry and fisheries sectors. Among this group, Sao Tome and Principe offers the closest parallels with Bougainville with an agriculture-based economy driven principally by cocoa exports. None of these states

has a tourism industry despite the scope they have for being marketed as tropical island paradises.

It is pertinent to take careful note of the development path of Sao Tome and Principe as it has, for many decades, had an economy based on cocoa exports. If Bougainville were to plan its economic future based on the development of the cocoa industry, it may look no further than Sao Tome and Principe to see how its development path may look—that is, one of being trapped in low-income status. Moreover, Sao Tome and Principe has an unsustainable economy propped up by aid flows that comprise more than 50 percent of annual revenue for the government and 17 percent of GDP. With agriculture difficult to tax and with little economic development outside of agriculture, corporate taxes represent just 3 percent of revenue, and tariffs are the main form of locally generated revenue.

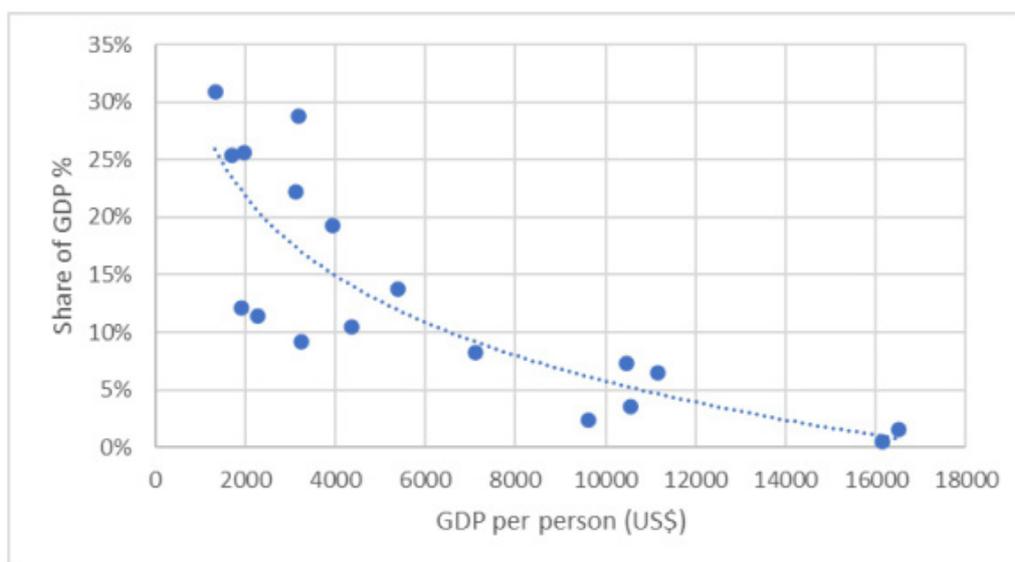
### 4.3. Small island states that Bougainville would want to look like

Fourteen of the 18 Group 1 states have been successful in dragging themselves out of low-income status, and eight of these could be thought of as middle-income or upper middle-income, where GDP per person exceeds US\$5,000. The success of these states represents proof that the challenges of remoteness and small scale are not insurmountable.

If Bougainville has ambition as an autonomous state, it should also have ambition to lift itself out of its low-income status. It is hard to rationalise ambitions of economic and political independence otherwise. In this case, Bougainville would need to look at what it is that has made these 14 states become viable economies, and should put in place development strategies to emulate them. With this as a given, the revenue system will need to be designed to accommodate the economy of the future. The experience of Sao Tome and Principe tells us that it is futile trying to plan a revenue system for the present because the scope for revenue collection is so limited.

For low-income countries that have succeeded in becoming viable middle-income states—and there are a number of good examples in neighbouring East Asia—the typical pattern has been to progress from an agriculture-based economy into downstream processing, then to build an industrial base, and then develop service industries. Figure 4.2 tells us that this shift away from reliance on the agriculture, fishing and forestry sectors also applies to small island states. There is a clear and pronounced pattern that suggests that the more a small island state diversifies away from these sectors, the more it develops. For example, among the seven wealthiest small island states, St Vincent and the Grenadines has the highest agricultural share in its economy at 8.2 percent. Among the other 11 countries, Cabo Verde has the lowest share at 9.2 percent. The two wealthiest small island states—Barbados, and Trinidad and Tobago—have shares of just 1.6 percent and 0.5 percent respectively.

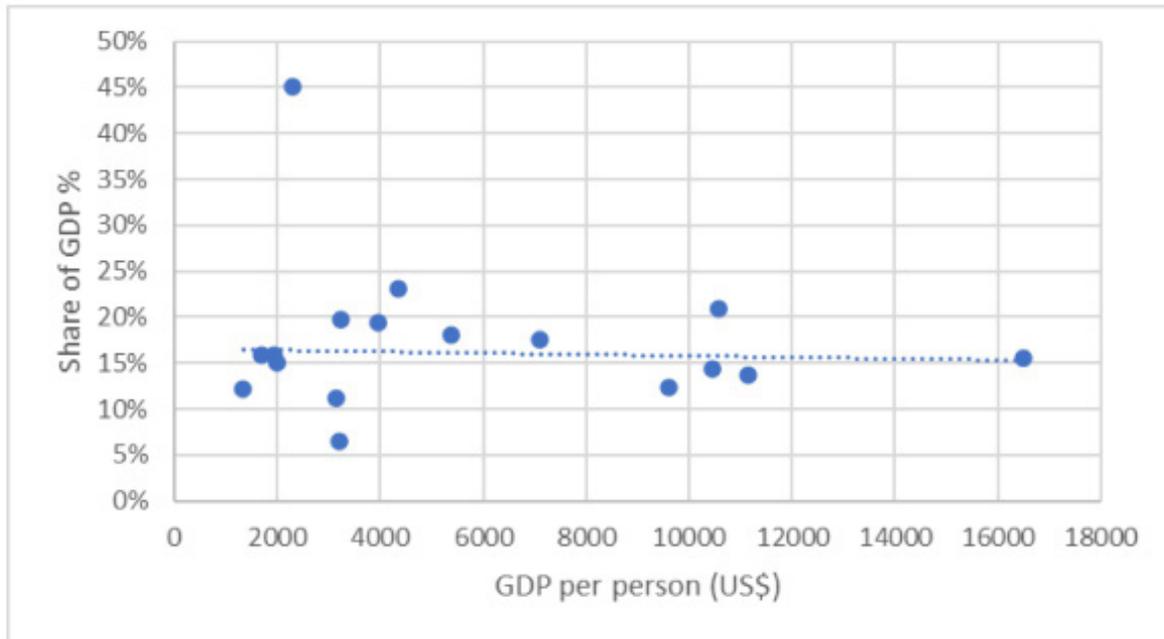
Figure 4.2: Agriculture's share in the economy versus GDP per person in 2018 (US\$).



Source: Data derived from UNdata website, <http://data.un.org/default.aspx>.

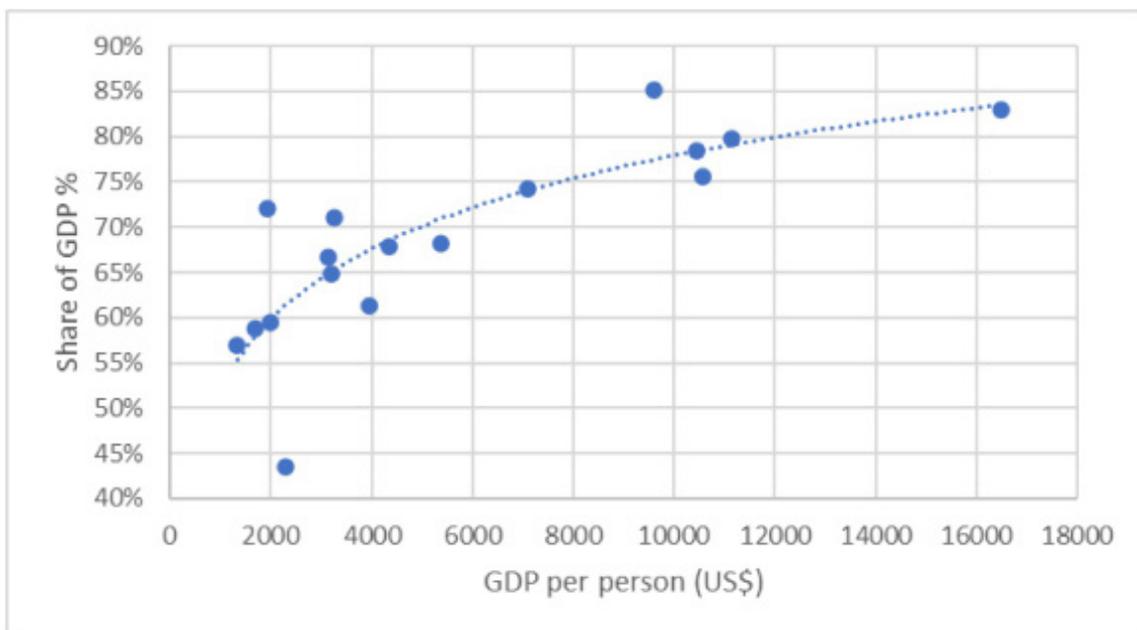
Figures 4.3 and 4.4 demonstrate clearly that the pattern of development for small island states is a little different to, say, countries of East Asia. Figure 4.3 shows that there appears to be little connection between the scope of industrial development and economic prosperity, suggesting that small island states skip this step in the path of development. Instead, development is driven by thriving services sectors.

**Figure 4.3: Industry share in the economy versus GDP per person in 2018 (US\$).**



**Source:** Data derived from the UNdata website, <http://data.un.org/default.aspx>. Trinidad and Tobago is excluded on the basis that it is a special case.

**Figure 4.4: Services share in the economy versus GDP per person in 2018 (US\$).**

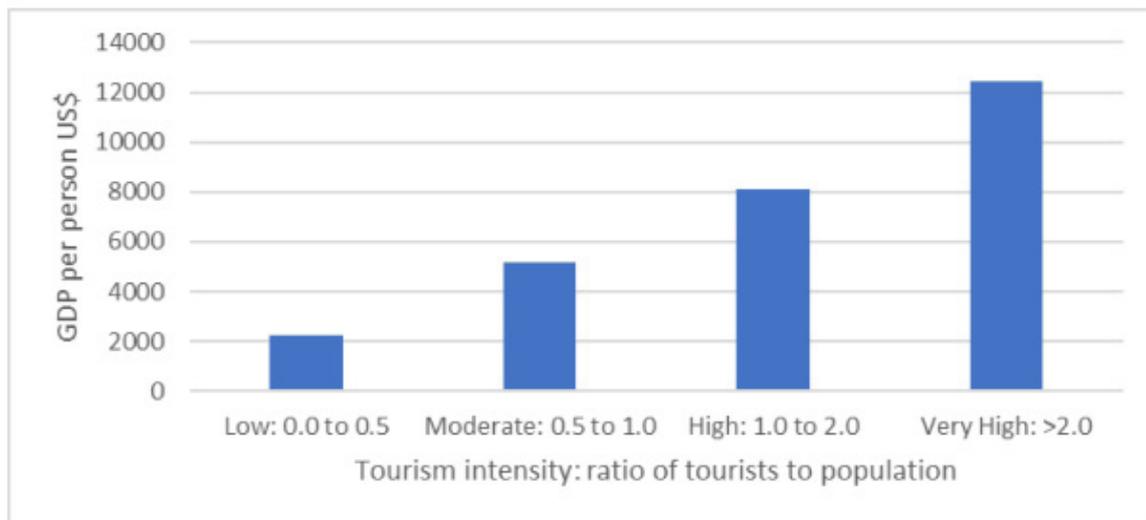


**Source:** Data derived from the UNDATA website <http://data.un.org/default.aspx>. Trinidad and Tobago is excluded on the basis that it is a special case.

## 4.4. Tourism is the key that can unlock economic development

Behind the services sector pattern shown in Figure 4.4 lies a powerful connection between the development of a small island state's tourism sector and how far it has progressed on the path of economic development. This is demonstrated in Figure 4.5, which compares a state's GDP per person with the number of tourist arrivals as a share of its population.

Figure 4.5: Average tourism intensity versus average GDP per person in 2018 (US\$).



**Source:** Data derived from the UNdata website <http://data.un.org/default.aspx>. Trinidad and Tobago is excluded on the basis that it is a special case.

That tourism has a clear and demonstrated comparative advantage among this collection of tropical and subtropical small island states is intuitive and should not come as a surprise. Island tourism is a well-established, high-end product that is exploited not only by independent small island states but also by the metropolitan-aligned Group 4 states shown in Figure 4.1. Moreover, island tourism is thriving among the multitude of nations around the world that have tropical and subtropical small islands within their boundaries—for example, the northern islands of Australia, Bali in Indonesia, Phuket in Thailand, the Greek Islands, the Spanish islands of Ibiza and Mallorca, and so on.

As a high-end product, the island tourism market is able to overcome the high logistical costs of delivering its product. This is what makes it perhaps the only viable industry for economic development for small island states—at least for most of them. Trinidad and Tobago is an exception that will be discussed in the next section. It is notable that there are numerous micro-states with tiny populations and burdened with extreme geographic isolation that have built viable tourism-based economies. The Cook Islands and the Seychelles belong in this category, and they are states verging on high-income status.

How Bougainville can proceed down a path of tourism development is a topic for another report, but suffice to say that public-private partnerships with the tourism sector will be key, as will be the support of development partners for building supporting infrastructure. For the purposes of this report, what is important is to set in place a revenue system that will successfully tap into this sector. The success or otherwise of other small island states will help provide guidance on the way forward, and this will be expanded upon later. From the outset, it is presumed that a key source of revenue will need to be taxation on the spending of tourists—including hotels, taxis, restaurants, agent services, hire cars, and so on—and a VAT is an effective way of doing this.

## 4.5. Mining may or may not be important

Trinidad and Tobago is an important special case among the Group 1 small island states. A tourism industry

barely exists in Trinidad and Tobago, yet it has the second highest GDP per person in this group. Trinidad and Tobago has followed a development path based on rich oil and gas reserves and is a path that Timor-Leste is hoping to follow. If mining kick-starts in Bougainville, it may well help in its development journey.

A thriving mining, oil and gas sector in a small developing country is often cause for ringing alarm bells—in particular, the sector is often associated with corruption, inequality, failed development and civil unrest—a point that the people of Bougainville hardly need to be reminded of. However, Trinidad and Tobago appears to have navigated a path that has delivered on both economic and social development. It is an upper middle-income state with good outcomes in terms of health and education indicators and access to services. According to the United Nations Human Development Index—a composite measure of a country’s state of social development—Trinidad and Tobago ranked 63rd in the World in 2018 with a score of 0.799.<sup>7</sup> This is compared with averages among ‘high’ and ‘very high’ human development countries of 0.75 and 0.89 respectively.

If Bougainville were to revisit mining as an opportunity to help it on its development journey, it is clear that it should look closely at what Trinidad and Tobago has done. Crucial to Trinidad and Tobago’s success has been its ability to tap into the sector to finance its Budget. About one-third of all government revenue is drawn directly from the oil and gas industry in the form of income share and corporate taxes<sup>8</sup>. Most of the balance of revenue is drawn from corporate taxes in an economy dominated by the integration of goods and services businesses with the oil and gas industry.

At the same time, it is also clear that Bougainville will need to study states that have extractive industries but have failed in deriving revenue from them and so failed to use them to help finance development. PNG perhaps provides the best lessons for Bougainville on what should be avoided. Over the five-year period 2014–2018, K110 billion worth of oil, gas, copper, gold and nickel was exported from PNG<sup>9</sup>. In what can only be described as a remarkable failure of the revenue system, the PNG Budget secured just K3.8 billion in revenue. Even more remarkable, only K1.4 billion was tax revenue, with the remainder derived from dividends on the state’s shareholdings. It is notable that the only companies that paid tax over this period were those that the PNG government has equity in. This means that for PNG’s world-class mines in which there is no state equity—most notably the Lihir and Porgera gold mines and the Ramu Nickel mine—the revenue accruing to the state is negligible and therefore their contribution to PNG’s development is negligible.

To put all this into perspective, about 25 percent of Trinidad and Tobago’s minerals exports accrue to the Budget.<sup>10</sup> By this measure, and all else being equal, the PNG government has missed out on about K27 billion in revenue over the years 2014–2018 directly as a result of its failed revenue system.

If Bougainville is to have a mining sector, it will need to design a revenue system that works—one that captures the good lessons from Trinidad and Tobago and the bad lessons from PNG. This idea will be elaborated upon later.

## 4.6. Labour mobility and remittances

For many of the Group 1 small island states, remittances from the earnings of people who go abroad to work provide important contributions to domestic economic activity. In some sense, remittances can be thought of as the export of labour services. The earnings that are sent home invariably are diverted to private consumption and investment spending, thereby providing a boost to domestic economic activity. With limited economic opportunities beyond tourism, remittances provide a good opportunity for small island states.

Table 4.1 shows the pattern of remittances among the 18 Group 1 states by breaking them down to subgroups of six according to their level of GDP per person, and then categorising the importance of remittances in each

<sup>7</sup> UNDP Human Development Reports <http://hdr.undp.org/en/data>

<sup>8</sup> Trinidad and Tobago Central Bank Economic Bulletin, [www.central-bank.org.tt/sites/default/files/reports/economic-bulletin-january-2020\\_0.pdf](http://www.central-bank.org.tt/sites/default/files/reports/economic-bulletin-january-2020_0.pdf)

<sup>9</sup> BPNG QEB statistics Table 8.2 <https://www.bankpng.gov.pg/statistics/quarterly-economic-bulletin-statistical-tables/>

<sup>10</sup> Trinidad and Tobago Central Bank Economic Bulletin, [www.central-bank.org.tt/sites/default/files/reports/economic-bulletin-january-2020\\_0.pdf](http://www.central-bank.org.tt/sites/default/files/reports/economic-bulletin-january-2020_0.pdf)

subgroup. As might be expected, remittances are low in the higher income states. From the perspective of individuals who choose to go abroad for work, the whole point of the exercise is to relocate to places that offer higher wage rates. Where the small island state offers high wage rates by virtue of its high level of development, the incentive diminishes.

Among the middle subgroup, three states have a high level of remittances in the range of 5–10 percent of GDP, and the other three have a very high level at above 10 percent. One of these is Tonga, which is a special case as it is the only state among the Group 1 countries that has an economy dominated by remittances—which were at 36 percent of GDP over the years 2014–2018. Tonga has therefore found a way to advance to middle-income status without a viable economic sector, apart from that which services remittance-driven consumption expenditure.

Samoa may offer the best example for what a future looking Bougainville might look like. Both tourism and remittances form the economic core of Samoa. Tourism spending is at 20 percent of GDP and remittances at 16 percent of GDP. The two sectors are in fact intertwined, with much of the tourism base associated with people who have permanently settled abroad, along with friends and family from where they live.

An interesting insight revealed in Table 4.1 is that for most of the lowest six income states, remittances are low. These states are also characterised by the absence of a tourism sector. It is clear that a small island state without one or both of these sectors, or without a well-designed minerals sector as in Trinidad and Tobago, will be confined to low-income status. One might expect the incentives for people to find work abroad might be highest among these states. But there are logistical barriers to overcome, not least of which are the costs of travel. The way in which Bougainville might tap into the remittance ‘industry’ is a topic for another report, but from the outset it is clear that state intervention to overcome the logistical barriers will be important.

In terms of its revenue system, if Bougainville were to pursue the opportunities of remittances, then it is clear that the way to tap into them will be to have a robust system of taxing domestic spending—that is, a VAT—but this is also the case if tourism becomes important.

**Table 4.1: Classifying the Importance of Remittances Among Group 1 Small Island States (Remittances as % of GDP 2014–2018)**

|                           | <b>Number with remittances &lt; 5% of GDP</b> | <b>Number with remittances 5% to 10% of GDP</b> | <b>Number with remittances &gt; 10% of GDP</b> |
|---------------------------|---|---|--|
| Six lowest income states  | 4   | 1   | 1  |
| Middle six states         | 0   | 3   | 3  |
| Six highest income states | 6   | 0   | 0  |

**Source:** This table is derived from data available from the UNDP Human Development Reports website <http://hdr.undp.org/en/data>

## 4.7. What do revenue systems of small island states look like?

On average, tax revenue collected by the small island states of Group 1 amounts to 19.5 percent of GDP and foreign grants an additional 5.2 percent of GDP (Figure 4.6). As would be expected, grants are, in general, more important for lower income states. Tonga and Sao Tome and Principe receive grants equivalent to 17 percent of GDP, Micronesia 15 percent of GDP, and Vanuatu 11 percent of GDP. However, two of the poorest countries—Kiribati and Timor-Leste—receive, respectively, just 2 percent and 1 percent of GDP. The clear message here is that aid flows are not necessarily directed to the poorest countries, and Bougainville should not take aid for granted. If Bougainville is to tap into foreign aid, it will need to strategically nurture its relationships with donors.

There are a variety of views on sources of tax revenue among the Group 1 states. For example, Vanuatu collects no corporate taxes or personal income taxes and instead relies on the VAT for 80 percent of the tax take and tariffs for most of the balance. The Maldives and Trinidad and Tobago collect corporate taxes but not personal income taxes. In fact, personal income taxes are a relatively unimportant source of revenue across most of these small island states—averaging just 2.2 percent of GDP (Figure 4.6). There may be a message here for Bougainville

that says personal income taxes are perhaps not worth the administrative burden associated with applying them.

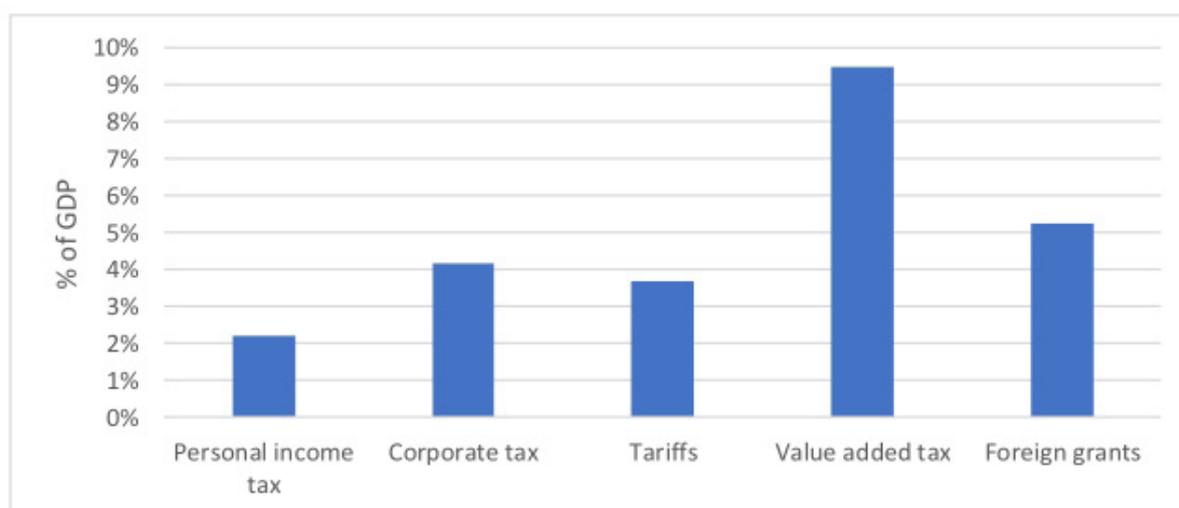
Corporate taxes tend to be more important, but vary considerably from state to state. Oil- and gas-rich Timor-Leste, and Trinidad and Tobago collect corporate taxes equivalent to 8.7 percent and 13.9 percent of GDP respectively. For most other states, the collections from corporate taxes are less than 5 percent of GDP, and the average is 4.2 percent overall (Figure 4.6). Among the economies that have developed an economic base of tourism there is no clear pattern. The highly successful tourism economies of Barbados, Maldives and Grenada have corporate tax receipts of 3.4 percent, 5.2 percent and 1.8 percent of GDP respectively. Samoa and Cape Verde have economies based on tourism and remittances—the most feasible prospect for a future Bougainville—and both have a low reliance on corporate taxes at 2.1 percent and 2.4 percent of GDP respectively.

Tariff revenue is relatively modest across the Group 1 states, averaging 3.7 percent of GDP. In some sense this is a surprise because in small island states where almost all consumption is imported, tariffs act as an easy-to-administer de facto consumption tax. Instead, most states have adopted the strategy of using the VAT for raising revenue from goods and services. The downside of this approach is that the VAT imposes a considerable administrative burden on both businesses and the government. An upside is that services are able to be taxed, which is crucially important for tourism- and remittance-based economies.

Although the theoretical concept behind the VAT is to remove taxes from the cost base of exports, thereby making exports more competitive, in practice, tourism services are excluded either due to reasons of impracticality or by regulation. For example, it is very difficult to ‘zero-rate’ the VAT on tourist spending at restaurants, and tourist economies do not attempt to do so.

With the VAT representing a highly effective way to collect revenue from the tourism sector as well as from remittance expenditure, it has become by far the most important source of tax revenue—amounting to an average of 11.3 percent of GDP for Group 1 states (Figure 4.6). This share rises to 11.3 percent of GDP if the average is taken over the top eight tourist states and 13.0 percent of GDP for the top three remittance states.

**Figure 4.6: Average of revenue collected as a percentage of GDP by revenue category among Group 1 small island states.**



**Source:** Data derived from the UNdata website, <http://data.un.org/default.aspx>, and from the IMF Government Finance Statistics website, <https://www.imf.org/en/Data>.

## Ch.5 Conclusions and Recommendations

The total appropriation for the 2020 ABG budget was approximately K440 million, of which recurrent expenditures amounted to K179 million. The main items of recurrent expenditure included Education (43 percent), Personnel Management and Administrative Services (17.6 percent) and ABG Parliamentary Services (10.1 percent). However, the recurrent expenditure figure is an underestimate since some public services are funded directly from the PNG Budget. The most obvious example is outlays on health.

The bulk of revenues for the 2020 Recurrent Budget, some 84.4 percent, is sourced from the PNG Government. Revenues from within Bougainville make up just 15.6 percent (i.e. K28 million) of the total recurrent expenditure. Bougainville has several opportunities to expand its revenue base and allow it to become financially independent, but these come with a number of challenges. The obvious potential areas for revenue growth include cocoa, particularly for exports, tuna and game fishing, tourism and mining.

Bougainville was the largest producer of cocoa in PNG prior to the conflict, and the potential to regain the lost ground remains. Around two-thirds of the population relies on smallholder cocoa, intercropped with coconuts. In 2009, the cocoa pod borer pest devastated the crop. With research assistance from Australian Centre for International Agricultural Research (ACIAR), the cocoa pod borer problem is being overcome, and optimistically, yields could recover well beyond levels reached prior to the introduction of the pest. The larger the increase in yields the greater the potential for cocoa income to be reflected in VAT revenues.

It is estimated that some 30 percent of the total annual tuna catch to the value of around K1 billion is sourced from Bougainville waters. Under the BPA (s.86) the fishing licence revenues have to be shared between PNG and Bougainville according to a formula still to be negotiated. If Bougainville were to be allocated the full 30 percent of the total revenues generated by the PNG tuna harvest, it could accrue annual revenues of upwards of K130 million—however, tuna receipts vary significantly from year to year as tuna harvests and tuna prices are very variable—and depend on the licence fees paid under the Vessel Day Scheme now in place for regulating fishing effort in the Pacific.

Tourism, possibly based on visits to relics of World War II and big game fishing, has some limited niche market potential. However, its expansion will require better international connectivity and security for foreign direct investment, including law and order and secure access to custom land and waters.

Given Bougainville's location within the Pacific Rim of Fire, the possibilities for mining various minerals, particularly gold and copper, are huge. However, regaining the confidence of foreign investors for mining in Bougainville, following the collapse of the Panguna mine, is proving very difficult. Even more difficult is the effective management of the revenues from the sale of public resources such as minerals, forestry and fishing, which has long been a challenging problem for developing countries. The primary management problem has been with the effective expenditure of the resource revenues. Therefore, a major issue for discussion in Bougainville should be on whether institutional arrangements can be devised that will ensure that the resource revenues collected by the ABG—from, say, fishing, forestry or mining—will be put to good use in developing the economy.

We have argued for a management system where a share of mineral rents are directly paid to the public in the form of compensation for the sale of their asset. This has several advantages, including the fact that such transfers will bind the public across space and generations, concentrate attention on the returns from publicly owned assets, and create economic spillovers in the form of increased output and revenues for the budget. The model used in Alaska to manage the collection and distribution of its oil and gas revenues seems to be very worthy of consideration by Bougainville. This regime establishes a political constituency with an interest in protecting the revenues from corruption, waste, and so forth. If Bougainville is to adopt a policy of this kind, the nature of politics dictates that it should be done as soon as possible. Otherwise, if an alternative policy is adopted at the start, it will prove almost impossible to dismantle later as it will have formed its own constituency by then.

The transition to economic independence will take time; it will need to be staged, and it will require support from the PNG government. A successful transition to fiscal independence—meaning the capacity to fund the recurrent budget from internally generated revenues—requires growth of the formal economy and improvements in tax effort. The public sector has a role in creating the conditions for growth of employment, investment and ultimately income in Bougainville. This includes investment in upskilling of the workforce—a goal that can only be achieved with increased investment in education. Similarly, improvement in the health of the population requires investments in medical facilities and personnel. Access to basic services and economic opportunities demands improved connectivity, which in turn requires investments in transportation and telecommunications infrastructure. Finally, the costs of doing business in Bougainville have to be reduced to increase private investment in large-scale businesses such as mining, as well as in small-scale businesses such as niche chocolate manufacture. This requires improved law and order, greater security of contracts, and improved access to land for private enterprise. Each of the above-mentioned requires large and sustained investments in social and physical infrastructure for service delivery and economic growth.

The review of economic activities and revenue-collecting regimes in small island states in Chapter 4 provides several valuable lessons for an independent Bougainville. First, given Bougainville's geographic location and its resource endowments, the country is likely to prosper better by committing to tourism-based development rather than depending on smallholder cocoa, notwithstanding the ongoing Covid-19 lockdowns. The latter would most likely result in Bougainville muddling along on a low-income, low socio-economic development path. For the bulk of the population presently relying on smallholder cocoa production, a better arrangement would appear to be to take advantage of the seasonal-worker opportunities being provided by Australia and New Zealand. Hopefully too, tuna canning operations could be encouraged through foreign investment, which would provide job opportunities for mainly female workers.

Bougainville's resources also provide scope for the development of mining activities, although there are substantial social obstacles to overcome in such endeavours. Further, care would need to be undertaken to see that the revenues accruing to the government and their management do not follow the same disastrous path as in PNG, with the government collecting little revenue because of the concessions granted to the mining companies.

This last point reinforces the need to emphasise that an economically-independent Bougainville should take great care in the adoption of its institutional arrangements, as such arrangements are difficult to change once implemented. We refer here to arrangements such as providing secure, bankable leases to customary land, security of contracts, and generally an investor-friendly environment for domestic and foreign investors. And the most difficult of all to change are the mechanisms to distribute resource rents; thus, considerable care would have to be taken in the design of such mechanisms before the recommencement of mining (as explained in Chapter 3).

## 5.1 Policy recommendations

### **Recommendation 1**

Plan early for a well-designed revenue system appropriate for a future Bougainville because once the design is in place, it will be difficult to change.

### **Recommendation 2**

Plan for a transition phase in the revenue system where the existing capacity of PNG's tax administration system is utilised, but a transition plan is implemented for moving to a new autonomous revenue system and tax administration system. The design of a bridge to the future revenue system requires knowledge of the current position and an aspiration for the future.

### **Recommendation 3**

A new revenue system built around a VAT is the best way forward for a future Bougainville. The 15 percent rate adopted in Vanuatu may provide a good benchmark.

**Recommendation 4**

The new revenue system must be simple to administer. Personal income taxes, given their complexity, may not take priority. Besides, international experience in island states shows that they are low yielding, and often difficult to administer.

**Recommendation 5**

Whether or not corporate taxes should be part of the new revenue system warrants further investigation. Abolishing them will free up administrative capacity, but international evidence suggests that they provide greater scope for collecting revenue than personal taxes.

**Recommendation 6**

Revenue from Bougainville's natural resources—forestry, fisheries, minerals—could be based on ad valorem royalties on the value of output, while those on tuna caught by the international fleet could be collected through auction via the vessel day scheme. Ad valorem rates are simple to administer compared to corporate income taxes with the latter, as PNG's experience demonstrates, ineffective in capturing revenues from the exploitation of natural resources. Setting an appropriate royalty rate requires further investigation, but this would not be less than 10 percent for mining proceeds.

**Recommendation 7**

All revenue from natural resources could go to a managed fund, with, say, half the proceeds distributed on a regular basis equally to all adults registered on the electoral roll through their bank account. The balance of the proceeds could be used for investments into public infrastructure.

## References

- Akin, D. (1999). Compensation and the Melanesian state: Why the Kwaio keep claiming. *The Contemporary Pacific*, 11(1), 35–67.
- Batten, A., Gouy, J., & Duncan, R. (2009). Papua New Guinea Economic Survey: from boom to gloom? *Pacific Economic Bulletin*, 24(1), 1–26.
- Banks, G. (2008). Understanding ‘resource’ conflicts in Papua New Guinea. *Asia Pacific Viewpoint*, 49(1), 23–34.
- Bougainville Referendum Commission (BRC). (2020). *Bougainville Referendum interim report*. Government of Papua New Guinea.
- Bougainville Peace Agreement (BPA). (2001). [https://www.abg.gov.pg/uploads/documents/BOUGAINVILLE\\_PEACE\\_AGREEMENT\\_2001.pdf](https://www.abg.gov.pg/uploads/documents/BOUGAINVILLE_PEACE_AGREEMENT_2001.pdf)
- Chand, S. (2018). *Financing for fiscal autonomy*. The National Research Institute.
- Chand, S. (2015). *Bank interest rate margins in Papua New Guinea*. The National Research Institute.
- Dziedzic, A., & Saunders, A. (2020). *Institution building in Post-Referendum Bougainville*. The National Research Institute.
- Department of Foreign Affairs and Trade (DFAT). (2020). *The Bougainville Partnership (BP): Outcomes Report January-December 2019*, Department of Foreign Affairs and Trade, Government of Australia.
- Duncan, R. (1995). Commodity terms of trade and instability. In R. Garnaut, E. Grilli, & J. Riedel (Eds.), *Sustaining export oriented development: Ideas from East Asia* (pp. 271–292). Cambridge University Press.
- Duncan, R. (2007). Enhancing the labour absorption capacity of Pacific agriculture. *Pacific Economic Bulletin*, 22(1), 164–174.
- GoPNG. (2019). *Ministerial statement to the National Parliament on the status on Bougainville in regard to the Bougainville Peace Agreement three (3) pillars*. Port Moresby National Parliament.
- GoPNG. (2020). *Ministry of Bougainville Affairs – Ministerial Statement*.
- GoPNG&ABG. (2019). *Post-referendum planning taskforce minutes*. Port Moresby.
- Lummani, J. (2015). Post-1960s cocoa and copra production in Bougainville. In A. J. Regan & H. M. Griffin (Eds.), *Bougainville before the Conflict* (pp. 239–257). ANU Press.
- McKenna, K. (2019). *Status and implementation of the Bougainville Peace Agreement and implications for Referendum*. The National Research Institute.
- Moss, T., and Young, L. (2009). *Saving Ghana from its oil: the case for direct cash distribution* (Working Paper No. 186). Center for Global Development, Washington, DC.
- Punghau, A. (2020). *Ministerial Statement by the Minister for Post Referendum Consultation & Dialogue*. Buka, PNG.
- Ross, M. (2003). The natural resource curse: How wealth can make you poor. In I. Bannon and P. Collier (Eds.), *Natural resources and violent conflict: options and actions* (pp. 17–42). World Bank, Washington DC,.





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