



THE NATIONAL
RESEARCH INSTITUTE
PAPUA NEW GUINEA

RESEARCH REPORT

FINANCING FOR
FISCAL AUTONOMY:
FISCAL SELF-RELIANCE IN
BOUGAINVILLE

Satish Chand

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Abbreviations & Acronyms

- ABG Autonomous Bougainville Government
- ADB Asian Development Bank
- AIIB Australian Infrastructure Investment Bank
- APTC Australia Pacific Technical College
- ARoB Autonomous Region of Bougainville
- BPA Bougainville Peace Agreement
- DSIP District Support Improvement Program
- EEZ Exclusive Economic Zone
- FDI Foreign Direct Investment
- GDP Gross Domestic Product
- GoPNG Government of Papua New Guinea
- IRC Internal Revenue Commission
- JSB Joint Supervisory Body
- NEFC National Economic and Fiscal Commission
- NSPG North Solomons Provincial Government
- ODA Official Development Assistance
- PLF Pacific Labour Facility
- PNG Papua New Guinea
- PNGDF Papua New Guinea Defence Force
- PSIP Provincial Services Improvement Program
- RDG Restoration and Development Grant
- SPC Secretariat of Pacific Community
- SWP Seasonal Worker Program
- VAT Value Added Tax

Abstract

In a referendum to be held by or before mid-2020 the people of the Autonomous Region of Bougainville (ARoB) will have an opportunity to vote on their political future including the option for independence from Papua New Guinea. Autonomy has both political and economic dimensions. Independence lies on the extreme end of political autonomy while fiscal autonomy, defined here as the capacity to fund the recurrent budget from internal sources, is relevant regardless of the degree of political autonomy.

The Bougainville Peace Agreement includes a formal objective of fiscal self-reliance which is defined as having been reached in “the first year in which the revenues from company tax, customs duties and 70% of value added tax collected in Bougainville are equal to the value of the recurrent grant on a sustainable basis” (BPA, Section 137). The value of recurrent grant to the ABG-Budget from the National Budget in 2016 amounted to K41.3 million. Revenues from company taxes, customs duties, and 70 percent of value added taxes amounted to K2.4 million. Thus, the Autonomous Bougainville Government (ABG) had by 2016 reached just six percent of the distance to fiscal self-reliance.

On the broader considerations of fiscal autonomy, revenues from all internal sources for 2016 amounted to K23.2 million; that is, equal to 56 percent of the value of recurrent grant provided to the ABG by the National Government. In terms of total recurrent expenditures for 2017 of K162 million, revenues from internal sources amounted to 13 percent of the total. The ABG, following one of the resolutions from the Joint Review of the Autonomy arrangement of 2013, organised a Tax and Revenue Summit in 2017 to consider means of raising revenues for the budget from internal sources.

While fiscal autonomy is not a legal prerequisite for the referendum, political independence can be problematic without the internal capacity to fund government services. The analysis presented in this paper shows that fiscal self-reliance has not been reached, and doing so will require considerable expansion of economic activity within the Autonomous Region of Bougainville. Large-scale mining provides a route to fiscal self-reliance, but this strategy has risks in entangling the ABG in redistribution of resource rents as against a policy of inclusive/broad-based growth of the economy. Fishing rents have the potential to fund half of the recurrent budget but accessing these funds will require agreement with and cooperation from the National Government. Additional revenues may be secured over the medium to long-term through broadening of the tax base and the growth of the local economy.

This study provides a succinct summary of the progress made on, and options available to, achieving fiscal autonomy. Specifically, the study: (i) assesses progress made to date in reaching fiscal self-reliance; (ii) espouses potential sources of revenues to the ABG to hasten progress to fiscal autonomy; and (iii) investigates the potential contribution mineral rents can make towards achieving fiscal autonomy.

Executive Summary

Fiscal self-reliance is not a legal prerequisite for the conduct of the referendum. However, political independence without fiscal autonomy, the latter defined as the capacity to fund the recurrent budget from internal sources on a sustainable basis, is problematic. Consequently, the issue of fiscal autonomy will remain important before, during and after the referendum regardless of the outcome.

The total budget for the Autonomous Bougainville Government for 2016, the most recent period for which this data is available, was approximately 286 million Kina. The total budget for an independent Bougainville nation, calculated on the basis of population-weighted budget of the neighbouring Melanesian nations, will be anything between two to three times more.

The Bougainville Peace Agreement defines fiscal self-reliance, a narrow measure of fiscal autonomy, as having been reached in “the first year in which the revenues from company tax, customs duties and 70 percent of value added tax collected in Bougainville are equal to the value of the recurrent grant on a sustainable basis” (BPA, s.137).

Revenues from company taxes, customs duties, and 70 percent of value added taxes collected in Bougainville in 2016 amounted to K2.4 million which was equal to six percent of the K42 million provided by the National Government to the ABG in the form of recurrent grants. However, revenues from all sources within Bougainville amounted to 56 percent of the recurrent grant provided by the National Government in 2016.

In terms of fiscal autonomy, calculated as the share of the recurrent budget funded from all internal sources plus the notional K100 million arising as Bougainville’s share of tuna-license fee from fishing in its waters, total internal revenues for 2016 amounted to K123 million. This figure amounts to 76 percent of the recurrent budget of K162 million for 2017. The above however is an optimistic assessment of fiscal autonomy since the Budget omits several off-budget transfers from the National Government.

The gap between revenues and expenditures is filled by grants from the national government which were mandated by the Peace Agreement that was signed in 2001, and enshrined in the supporting legislations. These gap-filling grants were prescribed in recognition of the fact that the economy (and therefore the tax base) was destroyed by the conflict, while the restoration of basic public services and the reconstruction of public infrastructure were going to entail large outlays.

It was envisioned at the signing of the Peace Agreement that the economy of the Autonomous Region of Bougainville (ARoB) would recover over time, and in the process, provide revenues for the budget. The concept of fiscal self-reliance was introduced in the Peace Agreement in anticipation of a rebound in revenues generated from internal sources to the extent that the costs of sovereign services would be shared with the National Government once the set threshold was reached.

What was not anticipated by the architects of the legislation on fiscal transfers was the fact that ‘gap-filling’ grants eroded the incentives for the ABG to grow its own tax base. The mandatory nature of the grants lent the incentives for the ABG to blame the National Government for shortfalls in funding and supply of public services. Furthermore, grants from the Centre would have provided the National Government the opportunity to create fiscal dependency.

The impending referendum, and the option for political independence particularly, raise the urgency for the ABG to free itself from fiscal-dependency. Reaching for fiscal independence from the National Budget requires the ABG to consider options for growing the economy which will then provide the tax base for the budget.

A revenue option for the immediate term is access to fisheries rents, received in the form of licence fees collected for tuna caught within the waters of the ARoB. Securing this revenue-source requires agreement with and cooperation from the National Government. Mineral rents, in contrast, have promise as a source of revenue over the longer term but they also entail risks of restarting the dormant debates that led to the conflict in the first place.

The ABG could negotiate temporary access to the labour markets of Australia and New Zealand under the proposed Pacific Labour Facility. While the direct contribution of these schemes to the budget will be small, they offer an opportunity to rebuild skills that will be needed for a future mine in the ARoB.

There is weak data on the size of the economy, the population of Bougainville, and the total value of fiscal transfers from the National Government to the ABG. These data-deficiencies would have to be rectified to enable policymakers to better assess the size of the tax base, and the full costs of providing government services. The analysis presented here is based on preliminary data and guess-estimates, therefore caution must be exercised in interpreting the findings.

Ch. 1 Introduction

There is a general trend towards handing responsibility for delivery of public services to sub-national governments within a federal structure, which oftentimes is accompanied with commensurate powers to raise revenues locally (Rodden, 2002). The resulting fiscal devolution in “[t]he world’s changing political, economic, and cultural configurations are testing the unity—and borders—of many other countries” (Helman & Ratner, 1992, p.5). Papua New Guinea and its relationship with the Autonomous Region of Bougainville (ARoB henceforth) is not an exception to the above. The ARoB was provided political autonomy, and an option to vote for separate sovereignty later, as part of a peace agreement entered into in 2001 following a decade-long secessionist struggle (Regan, 2013). The demands for secession predate the birth of Papua New Guinea as a nation on 16 September 1975. The territorial boundaries of Papua New Guinea were defined by Great Britain and Germany, as the colonial powers of adjoining regions, first in 1886 and subsequently redrawn in 1904 as part of their broader bargain on international claims between the two masters (Sack, 2005). While neither the island of Buka nor that of Bougainville were ever ‘horse-traded’ between the two colonial powers, there is a widespread view amongst educated Bougainvilleans that their province was (Griffin, 2005; Sharkey, 2016). What was traded between Germany and Great Britain were the northern islands (namely, Choiseul, Ysabel, and the Shortlands) of what now constitutes the Solomon Islands and a people with whom Bougainvilleans share cultural, linguistic and physical features (that is, dark skin) (Ogan, 2005). Bougainville however had unilaterally declared independence days before Papua New Guinea though only the latter was given international recognition (Ghai & Regan, 2006).

The existing autonomy arrangement for Bougainville is enshrined in the Peace Agreement that was signed in 2001 following a decade-long (from 1988 to 1998) war. The three pillars of the agreement were asymmetrical autonomy, weapons disposal, and a deferred referendum. The first autonomous government was formed in 2005 but little progress on weapons disposal was observed by a mission deployed to Bougainville in 2012 by the United Nations (UN, 2012). The people of the ARoB will be participating in a referendum by mid-2020 where they will have an option to vote for independence. The agreement for the referendum is legislated in both the national and the Bougainville constitutions. The outcome of the referendum will be subject to ratification by the National Parliament following consultation between the two governments (BPA; s.311).

The challenge for contemporary Bougainville is that of achieving a balance between the needs for local autonomy in the supply of public goods and that of scale economies arising from being part of a larger nation state in an era of increasingly inter-dependent jurisdictions. The Bougainville Peace Agreement of 2001 (BPA henceforth) provides both the responsibility for and the resources to allow the Autonomous Bougainville Government (ABG henceforth) to provide public goods and services. The BPA envisions a transition to fiscal autonomy, noting in particular that that ABG “will have sufficient revenue-raising powers available to it to become financially self-reliant” (BPA, para. 134). While no timeframe was set as to when fiscal self-reliance was to be achieved, the impending referendum makes progress on the above urgent.

The target date for the referendum set by the national government and the ABG is the 15 June 2019, a year earlier than the day when the legislated window closes. This date was chosen to allow for slippage and leave time for the next presidential election that is due by mid-2020.¹ The requirement for a referendum before June 2020 including the option for independence is contained within the Peace Agreement (see Sections 309 to 324), and given legal effect via Part 4 of *The Organic Law on Peace Building in Bougainville - Autonomous Bougainville Government and Bougainville Referendum 2002* (Organic Law henceforth), Part XIV of the PNG National Constitution, and Section 193 of the *Bougainville Constitution*.²

¹ As explained by James Tanis, Secretary for the ABG-Department of Peace Implementation, at the seminar titled ‘Bougainville: Planning for a peaceful referendum and a stable post-referendum situation’ delivered at the Australian National University from 12.30 pm to 2.00 pm on 31 October 2017.

² The Peace Agreement was signed in 2001, the Organic Law on Peace Building in Bougainville enacted in 2002, amendments to the PNG Constitution that applies to Bougainville was legislated in 2002, and the Bougainville Constitution was enacted in 2004 (Regan, 2010).

The ABG is to be supported via grants from the national budget wherein the National Government is obligated to: “support the autonomous Bougainville Government in moving towards the goal of fiscal-self-reliance” (BPA, para. 137) and “make an unconditional grant to the Bougainville Government to meet the costs of functions – (a) for which the Bougainville Government is responsible until such time as when fiscal self-reliance is reached” (Organic Law, s.48). But it is unclear if the obligation for unconditional grants from the National Government extend after the referendum. The laws are clear in terms of the means to resolving disputes should they arise with respect to the provisions in the Peace Agreement. The BPA provides the overarching framework and “will be used as a guide ... to assist the Courts in interpreting the Constitutional and other laws which give [it] legal effect” (BPA, s.3a). The BPA moreover “is intended to be interpreted liberally, by reference to its intentions, and without undue reference to technical rules of construction” (ibid; s.3b). These provisions, as pointed out later, have not prevented disputes on fiscal transfers from arising or resolved them once they did.

Fiscal self-reliance is not a legal prerequisite for the conduct of the referendum. However, is political independence meaningful in the absence of fiscal autonomy? In other words, do the people of Bougainville have a real choice for independence when they lack the resources (financial and otherwise) to manage an independent nation state? Some commentators have argued that: “true sovereignty is inconceivable without a sustainable, internally generated fiscal base” (Ghani et al., 2007, p.162). Internally generated revenues in Bougainville has been at approximately 10 percent of the total government recurrent expenditures up to the year 2016. The intelligentsia and local leaders have both argued for large scale mining as being the only practical way to achieve fiscal self-reliance (Regan, 2013, p.437) wherein the reopening of the Panguna copper and gold mine has been proposed as a medium to long-term option (GoPNG & ABG, 2013; para. 7.2.5).³

The issue of fiscal self-reliance has been on the ABG’s policy agenda. The approaching referendum has raised concerns within the ABG regarding the dependence on the national government for transfers to the budget. A *Taxation and Revenue Summit* was proposed for 2014 with the objectives of: (i) reaching consensus on the means of improving efficiency and efficacy of the tax system; and, (ii) developing strategies for reaching fiscal self-reliance as stipulated in the Peace Agreement and the National Constitution (GoPNG & ABG, 2013, p.58). The Summit was held in September 2017 and information provided at the summit has been used extensively in the subsequent analysis.

The question of fiscal autonomy will remain pertinent regardless of the outcome of the impending referendum. That is, the government in Bougainville will have to secure resources – both in the form of finance and manpower – to supply public goods and services. While access to skills is as important as that of finance, my focus here is on the latter only. International experience suggests that the means to achieving fiscal autonomy can affect the behaviour of sub-national governments in terms of their effort to collect taxes at the local level, deliver public services within their jurisdiction, and secure the interests of local residents as against the taxpayers from the nation at large (Blöchliger & King, 2006).

This paper provides data and a discussion on progress made towards achieving fiscal self-reliance. Specifically, it presents the definition of fiscal self-reliance, an assessment of the progress made, and the means to hastening the pace of progress towards realising fiscal self-reliance. The rest of the paper is structured as follows. Section 2 extends the discussion on the relationship between fiscal capacity, state strength, and the economy; Section 3 provides the legal definition and underlying rationale for fiscal self-reliance as reflected in the enabling legislations; Section 4 provides the starting point for a deeper discussion on the quantum of resources that an autonomous region of Bougainville will need; and, Section 5 considers options for broadening the tax base. Section 6 focuses specifically on the taxes that may be used to generate revenues for the budget; Section 7 presents estimates of the financial cost of sovereignty; and, Conclusion follows.

³The view that large scale mining will fund an independent Bougainville is shared widely amongst the Bougainville leadership and local intelligentsia.

Ch. 2 Fiscal capacity, State strength, and the economy

Fiscal capacity is a subcomponent of state capacity. State capacity includes the ability of the state to implement a suite of policies including the power to raise taxes, enforce law and order, underwrite contracts including the rights to property, and support the functioning of markets through supply of public infrastructure. Taxation and the enforcement of law and order are critical functions of a State: both of these functions are delivered from the centre in a modern state. The ability of the state to tax economic activity and enforce law and order within its jurisdiction rests critically on the coercive capacities of the state, but the efficacy of taxation and law-and-order systems as a whole, rests on voluntary compliance by the majority of the population to the norms set by society implying that coercion is necessary for only a small minority. The state draws its legitimacy to pass laws and spend funds raised from the public from a representative parliament. The funds raised through taxation are used to provide goods and services to the public, allowing them to judge the return on their sacrifices, thus closing the feedback loop between the people and their representatives in parliament.

Policies successful in growing the economy strengthen fiscal capacity that in turn allow for improved supply of public goods leading to a virtuous cycle between fiscal capacity and state strength. The reverse may be equally true: as an extreme case, states that fail to underwrite law and order within their jurisdiction also fail to protect the rights of individuals to property and person, and such failure on a systemic basis may be both a cause for and consequence of a civil war. An initial breakdown in law and order can lead to a spike in demand for policing and a simultaneous decline in economic activity. For example, a widespread breakdown in law and order can lead to a collapse in the tax base as economic activity retracts into the informal sector. Fiscal capacity is lost as the rights to property and the fears to personal safety cause the population to withdraw from the formal economy. Toreaas (2014) provides an excellent, albeit fictional, account of how an entire village decamped for the hills at the start of the conflict in Bougainville with devastating consequences for the villagers. The legitimacy of the state is lost when law enforcement is seen as perpetrating rather than containing violence. In sum, the powers to tax is provided for under legislation, the legitimacy to tax is drawn from a representative parliament,⁴ and the market economy provides the base for taxation (Herb, 2005). A breakdown in legal order and the collapse of the market economy can render a tax system inoperable.

Bougainville illustrates the above-mentioned dynamics. It declined from being a well-functioning province of Papua New Guinea up until the beginning of the civil war in 1989 to a collapsed state by 1997 when nearly one third of the population were living in 'care centres' (Regan, 1998). Pre-conflict, Bougainville was a wealthy province with highly favourable socio-economic indicators relative to the rest of the nation. Per capita income at 1,973 kina in 1983 was the second highest of the 20 provinces of Papua New Guinea; surpassed only by the National Capital District (with per capita income of 2,115 kina) which hosts Port Moresby, the nation's capital (World Bank, 1988). At that time Bougainville contributed 14 percent of national income and half of national exports, while accounting for less than five percent of the total population of Papua New Guinea. In terms of social indicators, Bougainville had the highest life expectancy of any PNG province (at 59.6 years compared to the national average of 49.6 years); the lowest infant mortality (33 deaths per 1,000 live births compared to the national average of 72); and the second lowest proportion of the population without any schooling (at 50.1 percent compared to the national average of 78.0 per cent) (ibid; vol. 1: 98). The situation as of 2013 was very different to that prior to the conflict in that some 90 percent of the population depended on agriculture for sustenance while law and order problems, poor access to credit, and poor infrastructure remained major constraints to the growth of private enterprise (GoPNG, 2013, p.27).

To facilitate discussion of the relationship between state characteristics and the economy I will begin by summarising salient aspects of the transition in state capacity over the past three decades in Bougainville.⁵ The

⁴ The principle of being represented in decision-making for paying taxes goes back to the Magna Carta.

⁵ Detailed accounts of the conflict dynamics and the negotiations to peace are provided in Regan (1998).

period from 1976 to November 1988 was relatively peaceful, with the North Solomons Provincial Government (NSPG) being able to underwrite law and order; ensure access to public goods such as basic healthcare, transportation infrastructure and primary education for the majority of the population; and, markets supplied goods and services to and generated income for the majority of the population. This period of healthy state capacity and strength with functioning markets was followed by a repressive state that took hold in late 1988 when PNG police mobile squad and subsequently members of the PNG Defence Forces (PNGDF) were deployed to Bougainville from elsewhere in PNG to restore law and order following the felling of electricity pylons using explosives in Panguna in November 1988. Regan (1998) reports that the members of the police and defence forces charged with the task of restoring law and order committed “random human rights abuses” (p. 277). Violence escalated and spread throughout Bougainville within the next year. The provincial government was suspended in June 1990, and an attempt was made by the national government in 1997 to deploy mercenaries to end the rebellion (Dorney, 1998). A detailed coverage of the conflict is beyond the scope of this paper but what is relevant for this section is that the violent dynamics of suppression and its counter-reaction led to a conflict that spiralled into a civil war with catastrophic consequences for the welfare of the public at large. State capacity and strength were sapped as the crisis deepened, and the legitimacy of the local and national governments to restore order was dissipated.

International mediation led to the signing of the Peace Agreement in 2001 which ensured the departure of the PNGDF and the return of the police from the mainland. This led to a slow change from a repressive state to a transitional administration before democracy was restored via the election of the ABG in June 2005. Peace returned with the restoration of democracy. The ABG over time regained legitimacy, and the capacity, to deliver basic services, enact laws, and enforce law and order within the autonomous region, albeit from a low base.

Against the background of this stylised depiction of the transition in state strength and capacity in Bougainville, I now consider how investment in state capacity can simultaneously raise government revenues (i.e. strengthen fiscal capacity) and support markets (i.e. build legal capacity) through strategic deployment of revenue and tax policies.⁶ Obviously the ABG enjoys access to a wider suite of policies than revenue and tax policies but a focus on these two will serve to highlight the causal linkages involved. The success of revenue and tax policies would be marked by growth in the formal (i.e. monetised) economy that in turn would contribute to broadening of the tax base. I will compare the above to a situation where government revenue is generated through resource rents only.

An indication of state strength is its capacity to tax domestic production and support development (Acemoglu, 2005; Di John, 2010; North, 1989). Weak states fail to raise the requisite resources to fund public infrastructure such as roads and legal systems that are necessary for private enterprise. Low income countries typically raise anything between 10 and 20 percent of GDP in tax revenues but the limits to what may be generated by a state in revenues seldom depends on the administrative capacity of the State (Besley & Persson, 2014). Rather, it is the political compact between the government and the governed and the development dividend that arises from economic activity that drive state finances. The compact is harder to form in situations of spatial, ethnic and linguistic divisions which diminish the sense of a common people and may stifle the collection of tax revenues.

The people of Bougainville have claimed a separate identity and the war may have brought these issues to the fore. The conflict with the police and then the PNGDF who were both seen as originating from outside of Bougainville would have cemented ties between people from all over Bougainville. The war also fractured communities within Bougainville, the effects of which may still be present. Noting these divisions, the ABG in designing its revenue and tax policies has the opportunity to:

- (i) improve service delivery;
- (ii) raise economic activity; and,
- (iii) strengthen ties across its peoples for nation-building.

With regards to the first of the above-enumerated, Bougainvilleans are fortunate in having some memories of

⁶I follow Besley and Persson (2010) who model fiscal capacity and legal capacity as being complementary.

a functioning state where basic services were readily available, security of person and property was widespread, and the markets functioned in providing goods, services, and income throughout the ARoB. These memories can be a significant asset in resuscitating the economy and in restoration; the latter defined in the legislation (i.e. the Organic Law) as “the time when Bougainville has returned to a standard of peace and development approximating to that of the remainder of Papua New Guinea” (Organic Law, p.16).

Policymakers have a choice of implementing revenue and expenditure policies that support market activity throughout Bougainville, and without prejudice to any particular sector or community. Such ‘Common interest policies’ have the potential to cement ties across ethnic and socio-economic groups (Besley & Persson, 2010). The key advantage of such a ‘Common interest policy’ is that it spreads both the benefits of the state and the resource burden of state expenditure across the wider population. The main disadvantage of a ‘Common interest policy’ is that it takes time to imbed. However, a ‘Common interest policy’ founded on broad-based growth of the cash economy provides a sustainable economic base for taxation. A ‘Common interest policy’ therefore can lead to a symbiotic evolution of fiscal capacity, state strength and the expansion of the economy.

‘Redistributive policies’, in contrast, give priority to the development of large projects within narrowly defined industries and/or geography – the case of large scale mining on land held by narrowly-delineated customary groups is a case in point. The ‘Redistributive policy’ – and large scale mining in the case of ARoB in particular – provide rents that may boost government finances. Consequently, the presence of large resource rents can lead to the attainment of fiscal self-reliance quickly but such a strategy entails many risks. Redistribution is discriminatory and therefore can be divisive, to the cost of social cohesion – a fragile asset in a post-conflict society. The above is a significant risk to the ARoB. Picking sectors such as mining to favour for development will entail the redistribution of rents (i.e. super normal profits) to selective communities such as the landowners who sit on the mineral deposits. The redistributions can be divisive and they may provide the incentives for rent-seeking activity (Krueger, 1974). Consequently, a return to large-scale mining in the ARoB can be a shortcut to fiscal self-reliance but runs the risk of a return to divisive politics. The conundrum for contemporary Bougainville is how best to achieve fiscal self-reliance quickly whilst minimising the risks of being enmeshed in redistributive politics of the past. It is this policy conundrum that I turn to in Section 6.

The quantum of revenues collected by a government can be raised by a combination of an increase in the rate of taxes and through broadening of the tax base. On the former, there is considerable international evidence to suggest that the share of taxes in GDP rises with the level of development; that is, high tax states are part and parcel of development (Besley & Persson, 2010). Furthermore, the responsiveness (i.e. elasticity) of tax collections to the rate of tax is particularly high in post-conflict economies (Besley & Persson, 2014). That is, a winding up of the tax rate leads to commensurately large falls in the amount of tax collected which may be explained by the fact that considerable opportunity exists in post-conflict societies to both avoid (i.e. legally minimise) and evade (i.e. use illegal means to minimise) taxes paid. This means that room to raise tax rates in post-conflict economies are limited.

The sources of taxes in general change with the level of development. As income increases, the sources of government revenue shifts from trade taxes to income taxes and indirect taxes. Hence the key challenge for developing nations seeking to raise revenues is that of broadening the tax-base rather than raising the tax rate, given the significant latent capacity to shift economic activity from the formal to the informal sector. The lesson from the above for the design of revenue and tax policy in contemporary Bougainville is to keep the tax rate low and to target government expenditure at encouraging economic activity including enticing a shift from the informal to the formal sectors of the economy. The ABG however is constrained by the Organic Law on the changes that may be made to local taxes – an issue explained in the next section.

The above is also an argument for the decentralisation of the administration of taxation so that the legitimacy of the state is built through supply of public goods funded with taxes collected from the local population. While the Internal Revenue Commission (IRC) remits some of the taxes collected from Bougainville (which the taxpayer may not be fully aware of), the current arrangement disconnects taxes paid from the services received at the level of the local community. Besides, the public goods delivered in Bougainville by the National

Government circumvent the ABG, undermining the compact between the local taxpayers and their government. The above also lends the opportunity to the ABG to 'blame' the national government for the poor access to basic services in Bougainville.

In sum, I have argued for a revenue and tax strategy that aims to increase economic activity, with the beneficial effects on fiscal capacity and state strength. This is an argument for developmental taxation, which is in sharp contrast to a singular focus on revenues as the primary goal of tax policy (Sindzingre, 2007). In my setup, the milestones of success of any revenue and tax strategy are the incremental gains to the level of marketed GDP. Raising economic activity in my setup builds the tax base and in doing so ensures that taxes help rather than hinder economic growth. Conversely, when revenue targets take precedence then taxing economic growth becomes a significant risk. I next turn to explaining the meaning of and progress with fiscal self-reliance.

Ch. 3 Fiscal self-reliance – the meaning, measures, and progress

The legislations provide precise definition of fiscal self-reliance. The BPA states that fiscal self-reliance would have been deemed to be achieved in “the first year in which the revenues from company tax, customs duties and 70% of value added tax collected in Bougainville are equal to the value of the recurrent grant on a sustainable basis” (BPA, para. 137). The Organic Law, the Bougainville Constitution, and amendments to the PNG National Constitution all use the above definition of fiscal self-reliance. Following the attainment of fiscal self-reliance, surplus revenues are to be shared between the National Government and the ABG (Organic Law, s.40).

In terms of assessing progress on achieving fiscal self-reliance, revenues from all company taxes, customs duties, and 70 percent of value added tax collected in Bougainville are to be placed in a trust account created by the Minister in the national government responsible for internal revenues (i.e. the Treasurer). This sum is to be credited against the value of recurrent grant provided to the ABG to ascertain progress on attaining fiscal self-reliance as defined above (BPA, s.138; Organic Law, s.39). The rationale for apportionment of revenues between the ABG and the national budget is to ensure 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 ... so as [to] contribute to both national and Bougainville development” (BPA, s.135 and 139; Organic Law, s.40).

The objectives of the autonomous arrangement for Bougainville were to empower the people to solve their own problems, and to allow Bougainvilleans to work towards realising their own aspirations. Financial resources were guaranteed under the legislations to enable the ABG realise these aspirations. Thus, the architects of the BPA had foreshadowed sharing of the sovereign costs both prior to and after having reached fiscal self-reliance. The specifics of the revenue sharing formula however were left out for consideration during the five-yearly reviews of the implementation of the BPA (ibid). The financial arrangements including the monitoring of progress towards fiscal self-reliance remained a standing item in these five-yearly reviews (see BPA; s.299a).

The powers to raise revenues for the ABG-budget is shared between the national government and the ABG. The actual collection of taxes in Bougainville is left to the national government until ‘restoration’ is achieved; defined as “the time when Bougainville has returned to a standard of peace and development approximating to that of the remainder of Papua New Guinea” (Organic Law, para. 38). The Internal Revenue Commission (IRC henceforth) until then is charged with the responsibility to collect all national taxes and duties; and, to deposit all personal income taxes collected in Bougainville into a trust account for the ABG (BPA, para. 141(a); Organic Law, para. 41).⁷ All of the personal income taxes so collected together with the balance of 30 percent of Value Added Taxes collected is distributed to the ABG on request to be used “for the purpose of supporting development” (BPA, para. 141(a); Organic Law, para. 42).

The National Government retains the right to set rates for company taxes, value added taxes and customs duties while the ABG is given powers to adjust company tax rates applicable in Bougainville to within plus and minus five percentage points from the national rate following the attainment of fiscal self-reliance (Organic Law, para. 43). The reasons for this restriction to the period following attainment of fiscal self-reliance is not provided but may be to prevent tax-competition between the ABG and the National Government that is to the detriment of the overall tax take. The ABG also has powers to set licensing fees for liquor sales and gambling, property taxes, motor vehicle registration charges, road user taxes and any other taxes which are available to provincial governments (Organic Law, para. 44).

There was a clear rationale for mandating grants from the national budget to the ABG when the Peace Agreement

⁷ The ABG introduced sales taxes on beer and cigarettes in 2011 which are collected by the Bougainville tax office.

was first signed. The economy of Bougainville had been destroyed during the conflict, therefore the tax base was weak and the potential to generate fiscal resources from within Bougainville limited. Consequently, grants from the national budget to the ABG were considered essential for restoration of basic services. The specific grants stipulated via legislation that were to be provided until fiscal self-reliance was reached included:

- a) Recurrent unconditional grants;
- b) Restoration and development grants;
- c) Conditional grants for specific purposes; and,
- d) An initial Establishment Grant (BPA, para. 149; Organic Law, s. 47).

The Recurrent Grant is provided to the ABG to meet the costs of functions for which it has responsibility. The value of this grant is determined by the *National Economic and Fiscal Commission*, which is sanctioned by the *Organic Law on Provincial and Local Governments to: “ensure that Provincial Governments and Local-level Governments obtain a fair share of national wealth and make recommendations to the National Executive Council on the allocation of grants to Provincial Governments and Local-level Governments”* (GoPNG, 1998; s.117(iii)). The amount of the grant payable is adjusted annually as required under the *Organic Law on Provincial Governments and Local Level Governments*. The value of the Recurrent Grant to the ABG (BPA; s.154), its timely release (BPA; s.155), and method of adjustments were like those for provincial governments. In summary, the ABG is provided a recurrent grant akin to the allocations for other provinces to fund public services for which they are handed responsibility. Furthermore, the value of the recurrent grant is to be adjusted to cover costs of newly transferred powers and functions to the ABG (BPA; s.151).

The Restoration and Development Grant is made to the ABG for public investments, and is set at an amount “no less than the 2001 Public Investment Programme appropriations for Bougainville” and “adjusted upwards pro rata in accordance with the National Public Investment Programme averaged over a rolling five-year period” (Organic Law, s.49). That is, the minimum allocation for public investment to the ABG is set at the level for 2001 with annual escalation factor set at the rate for the public investment program for the nation as a whole. In other words, the ABG is guaranteed fiscal transfers for public investments from the national budget at the level for 2001.

Conditional grants allow for funding of specific projects in Bougainville by the National Government. The ‘Special Intervention Fund’ (SIF) is an example of a conditional grant provided for the rebuilding of infrastructure in Bougainville. In addition to the above, members of the national parliament representing the ARoB receive grants in the forms of the District Services Improvement Program (DSIP) and Provincial Services Improvement Program (PSIP) from the national budget that is not reflected in the ABG-Budget. The values of these grants for 2014 to 2016 are shown in Table 1 below.

Table 1: Value of grants in Kina from the National Government to the ABG, 2014–16

Description	2014	2015	2016
Restoration & Development Program	15,000,000	20,000,000	8,000,000
Provincial Support Improvement Program	10,000,000	10,000,000	10,000,000
District Support Improvement Program	30,000,000	30,000,000	30,000,000
Special Intervention Funds	100,000,000	0	9,000,000
Total	155,000,000	60,000,000	57,000,000

Source: Presentation by Secretary for the Department of Finance and Treasury at the Tax and Revenue Summit on 27 September 2017.

The ARoB also receives large donor funding, but these are not reflected in the ABG-Budget.

In terms of revenues, the National Government collects ‘Bougainville Group Tax’, GST, and ‘Motor Vehicle Registrations’ while the ABG collects sales taxes on beer and cigarettes, liquor license fees, housing rentals and fees from grant of mining exploration licenses. Bougainville Group Tax is the tax deducted/withheld from the payroll of ABG, Bougainville parliamentarians and private enterprise operating in Bougainville. The value of these taxes for the three years to 2016 is given in Table 2 below. Total revenues generated from local sources amounted to K21 million, K19 million of which was from Bougainville Group Tax alone.

Table 2: Value of revenues generated within Bougainville, 2014–16.

Description	2014	2015	2016
Bougainville Group Tax	9,500,000	12,830,000	19,403,000
Goods & Services Tax	2,226,452	297,556	656,622
Motor Vehicle Registration	221,270	239,050	266,703
Liquor Licensing Fees	111,994	88,412	94,230
Liquor Tax	887,000	45,700	29,590
Tobacco Tax	7840	36,000	59,544
Housing Rentals	0	0	0
Sundry	1,028,855	564,333	164,297
Mining Exploration	0	0	40,000
TOTAL	13,985,425	14,103,066	20,716,002

Source: Presentation by Secretary for the Department of Finance and Treasury at the Tax and Revenue Summit on 27 September 2017.

I next present the data drawn from the 2016 ABG Budget to assess progress made in reaching fiscal self-reliance as defined in the legislations. Recall that the fiscal self-reliance is deemed to having been achieved when “revenues from company tax, customs duties and 70% of value added tax collected in Bougainville are equal to the value of the recurrent grant on a sustainable basis”. The values raised for the above-mentioned for 2016 is provided in Table 3 below.

Table 3: Progress on fiscal self-reliance, 2016 ABG-Budget

Description	2016	Notes
Company Tax - 100%	K727,850	IRC Trust Account Statement
VAT (GST) – 70%	K1,532,118	IRC Trust Account Statement
Customs Duties - 100%	K79,452	Aug 2016 YTD data from Customs extrapolated to Dec 2016
Total Bougainville Revenue	K2,379,009	
Bougainville Recurrent Grants	K41,291,300	DOTF Briefing Note dated 31 March 17
Fiscal Self Reliance achieved	5.66%	Target is 100%

Source: Presentation by Secretary for the Department of Finance and Treasury at the Tax and Revenue Summit on 27 September 2017.

Company taxes as reported by the IRC for 2016 amounted to K727,850; the corresponding figure for 70 percent of VAT was K1,532,118; and, 100 percent of Customs Duties amounted to K79,452 giving a sum-total of K2,339,420. The National Government provided K41,291,300 in the form of recurrent grant, meaning that the ARoB had reached 5.66 percent of the value required for achieving fiscal self-reliance. Thus, on the legislated

definition, the ABG had covered barely six percent of the distance to fiscal self-reliance by 2016.

What if we include all revenues generated in Bougainville? Table 4 provides data on all revenues generated for the budget within Bougainville for 2016. The largest items of revenue include the Bougainville Group Tax which amounted to K19.4 million, all of GST which amounted to K2.2 million, and all of Company taxes which amounted to K0.7 million. A caveat with regards to the figure for company taxes is in order here: apportioning income and therefore tax liability between Bougainville and the rest of PNG is difficult for companies and therefore this figure may be an under-estimate of the true liability. Notwithstanding this qualification, total revenues generated for the ABG-Budget from internal sources for 2016 amounted to K23.2 million while the value of Recurrent Grant from the National Government was K41.3 million. These figures reveal that internally generated revenues equalled 56 percent of the value of recurrent grant provided by the National Government in 2016.

Table 4: Revenues generated for the ABG-Budget from all internal sources, 2016

Source	Kina
Bougainville Group Tax	19,403,000
Goods and Services Tax – 100%	2,188,740
Company Tax – 100%	727,850
Customs Duties – 100%	79,452
Motor Vehicle Registrations	266,703
Liquor Licensing Fees	94,230
Beer Sales Tax	29,590
Cigarette Sales Tax	59,544
Sundry Revenue	164,297
ABG Mining Exploration Licence	40,000
Miscellaneous	137,204
Recoveries from Former Years	43,007
Total Internal Revenue	23,233,617
Total Recurrent Grants	41,291,300
Percentage Achievement	56.27%

Source: Presentation by Secretary for the Department of Finance and Treasury at the Tax and Revenue Summit on 27 September 2017.

It would be wrong to assume that the K41.3 million shown in Table 4 is all of the support that the ABG gets to providing public services. The National Government funds several programs that are not reflected in the ABG-Budget. The major items of public expenditure that is funded ‘off-budget’ include:

- a) Hospital Services which is through the National Department of Health;
- b) Church Health and Education Services funded through National Government Grants to Churches’ Secretariats;
- c) National Judicial Service with a single judge who is devoted almost fulltime in Bougainville;
- d) Magisterial Services – with two magistrates devoted fulltime to Bougainville;
- e) Ombudsman;
- f) Public Prosecutor;
- g) Public Solicitor;
- h) Police Service wages;

- i) Teachers – TFF Program and Salaries for Teachers;
- j) Correctional Services; and,
- k) Operating Cost of all statutory authorities including Maritime Resource Authority, Forestry and Commodities Boards.

An alternative way to look at the extent of fiscal transfers to the ABG is to consider separately the values of recurrent grants from the National Government and internally-generated revenues. Table 5 shows the breakdown for all of the major departments. The total recurrent budget for 2017 was K162 million. The major expenditure items were: Education (K65 million or 40 percent of the total Recurrent Budget as reported in the far right-hand column of Table 5); Personnel Management and Administrative Services (K30 million, amounting to 19 percent of the total); and Parliamentary Services (K30 million). The last row of Table 5 shows that the total value of recurrent grants was K141 million, that for internally generated revenues was K21 million,⁸ and that grants amounted to some 87 percent of the recurrent budget for 2017. In other words, internally generated revenues amounted to less than 13 percent of the total recurrent outlays in 2017.

Table 5: Recurrent funding from Bougainville and the National Government, 2017

Autonomous Bougainville Government Department		Recurrent Grants (290)	Internal Revenue (718)	Budget Total	
		K	K	K	%
The President and the Bougainville Executive Council	PBEC	3,250,696		3,250,696	2.0%
Treasury and Finance	DT&F	4,757,569		4,757,569	2.9%
Personnel Management and Administrative Services	DPMAS	30,408,471		30,408,471	18.8%
The Referendum, Veteran's Affairs and Peace	DRVAP	561,362		561,362	0.3%
Health	DOH	1,322,149		1,322,149	0.8%
Primary Industries	DPI	421,655		421,655	0.3%
Economic Development	DED	178,931		178,931	0.1%
Mineral and Energy Resources	DMER	346,183		346,183	0.2%
Education	DOE	64,581,406		64,581,406	39.9%
Police, Corrective Services and Justice	PCSJ	10,469,548		10,469,548	6.5%
Technical Services	DOTS	259,472		259,472	0.2%
Community Development	DCD	747,014		747,014	0.5%
Community Government	DCG	5,501,044		5,501,044	3.4%
Lands, Physical Planning, Environment and Conservation	DLPPEC	270,600		270,600	0.2%
Parliamentary Services	DPS	9,000,000	20,316,045	29,316,045	5.6%
Bougainville Referendum Commission	BRC		500,000	500,000	0.0%
Bougainville Electoral Commission	BEC	1,700,000		1,700,000	1.1%
2016 Recurrent Unconditional Grant Cash Balance Re-Appropriation	DT&F	7,184,935		7,184,935	4.4%
Recurrent Budget Total		140,961,035	20,816,045	161,777,080	87.1%

Source: Based on information supplied to the author by the ABG-Department of Finance and Treasury.

⁸The sum of K21 million excludes company taxes, customs duties and 70 percent of the GST collected in Bougainville.

The information provided in Table 5 is not an exhaustive list as additional (and unrecorded) off-budget support is provided by the National Government to the people of Bougainville. As an example, the tuition subsidies for residents of Bougainville studying elsewhere in PNG are not reflected in the budget of the ABG (GoPNG, 2013, Chapters 6 and 7). An estimate of the value of these transfers is not available but they can be large relative to the amount of revenues raised within Bougainville.

What room does ABG have in raising revenues from internal sources? As a sub-national government, the ABG has wider powers than the provinces in the nation to raise revenues locally but these are short of those afforded to sovereign states. As stated earlier, the National Constitution states that: “the Bougainville Government shall have sufficient revenue raising powers to enable it to reach fiscal self-reliance, and the National Government shall support the Bougainville Government in reaching fiscal self-reliance” (PNG National Constitution; s.324(a)). These powers include the introduction of local taxes, and those to adjust corporate rates but only after having achieved fiscal self-reliance. Personal income taxes may be adjusted before attaining fiscal self-reliance but within five percent of the national rate (Organic Law, s.41(4)). ABG may also generate revenues from internal sources through use of property taxes, stamp duties, road user charges and gambling taxes.

Progress towards achieving fiscal self-reliance has been slow however. The Bougainville Constitution states that that ABG “shall aim to achieve fiscal self-reliance as soon as possible” (GoPNG, 2004; s.153(a)), but no milestones were provided in the Organic Law or the Bougainville Constitution to track such progress. Furthermore, the incentives for the ABG to aspire towards reaching fiscal self-reliance are weak at best. This is so for three reasons at least: first, the ABG is guaranteed access to grants from the national government, therefore lacks the need to expend effort in growing its own revenue base; second, the absence of monitoring may have permitted the ABG to ignore the need for generating revenues for the budget from within Bougainville; and, last, education and health services being delivered by the National Government directly to the people of Bougainville would have distanced the recipients of these services from the ABG. These factors may explain the slow progress made towards achieving fiscal self-reliance, and the high dependence on national grants for the delivery of basic services in Bougainville. The ABG moreover has complained repeatedly that its activities are hamstrung by the failure of the national government to provide grants in a timely manner as legislated in the Organic Law.⁹ While I do not have the data to test the veracity of this claim, and doing so in any case is beyond the purview of this paper, the incentives effects of fiscal transfers for such behaviour are observed more broadly – an issue that I take up next, and return to in more detail in the next section when discussing fiscal decentralisation under autonomous arrangements.

The poor incentives for the ABG to broaden its tax base may be a reason for the limited effort placed at expanding domestic production. The IRC collects all personal income taxes but these are then paid to the ABG. Thus, the existing revenue-sharing formula provides ABG the incentive to assist the IRC collect all personal income taxes but none of the company taxes at least until fiscal self-reliance is reached since company taxes is included in consolidated revenues and used only for the purposes of calculating fiscal self-reliance. While all personal income taxes are paid to the ABG, just 30 percent of the collections from Value Added Taxes (VAT) accrue directly to the ABG. Again, the incentives to expand economic activity that raises VAT is muted. Consequently, the greatest room to raise revenues for the ABG rests in expanding employment within the ARoB. On this, the ABG has attracted donor funding for rehabilitation of roads, bridges and ports. There is also recognition within the ABG of the potential for expansion of cocoa and copra production. Legislation has been passed to allow for a return of large scale mining which could be a source of jobs for many Bougainvilleans.

The 2017 ABG-Budget reveals a funding gap between total recurrent expenditure and domestic revenues of K141 million. Fiscal autonomy implies that the ABG would have to fill this gap with internally generated revenues. The total recurrent expenditure for the ABG for 2017 as reported in the Budget was approximately

⁹ The minutes of the meeting of the Joint Supervisory Body (JSB) of 15 December 2017 acknowledges the tensions on the value and release of Restoration and Development Grants (RDG), and resolved on a figure of K437 million to be paid in 2018 and 2019. It was also agreed that: “the two governments must assess the economic situation in the country and ability of the National Government to meet its commitment and stand ready to review the commitments under this compromise” (JSB, 2017; Section 4.4).

K162 million, of which K21 million, that is 13 percent, had been raised internally. At the current rate of collections, GDP would have to increase eightfold to provide revenues to fill the gap in the level of recurrent expenditures of the ABG for 2017. While no official estimates on the level of GDP are available, even if the existing tax take were doubled, GDP would still need to quadruple to close the funding gap of 2017. Assuming an annual rate of economic growth of five percent per annum will lead to a quadrupling of GDP in 28 years, and even a world record annual rate of growth of 10 percent will achieve the quadrupling in 14 years!

What are the options for broadening the tax base? There is limited information on the size of the local economy thus little can be said about the potential for fiscal autonomy; that is, the capacity of the ABG to fund its recurrent budget. Unofficial estimates of GDP of the ARoB for 2016 are at one billion Kina: constituting government consumption of K92.7 million, government investment of K209 million, private investment of between K60 million and K100 million, exports at K182 million with estimates for imports unavailable, and the balance of some 70 percent of GDP being private consumption.¹⁰ Tax collections for 2017 on the basis of this unofficial estimate of GDP amount to two percent. My own estimate for urban Bougainville for 2011 was a per capita GDP of K3,795 (Chand, 2011; p.10) which corroborates the estimate of aggregate GDP assuming a population of 300,000 or thereabouts.

These estimates suggest that there is room to raise tax effort. A tax-take equal to 16 percent of (the unofficial estimate of) GDP would have led to a balanced recurrent budget for 2017. But a large proportion of output originates in the informal economy and therefore falls outside of the tax net. And as explained in Section 2, taxes will impact on the mix between the formal and informal production. The ABG may be able to raise tax collections above the prevailing level through building a closer compact between the government and the governed as discussed in Section 2. The current reality however points to the fact that a balanced recurrent budget from internal sources under a business as usual scenario will not be achieved for at least another decade. Consequently, alternative sources of government revenues will have to be sought if fiscal self-reliance is to be achieved sooner.

Can the ABG borrow to replace the grants from the National Government? 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, s.165), and from abroad with the approval from the Central Bank (BPA; s.166) following consultation with the National Government (BPA, s.164). Any proposed budget deficits however require advanced approval from the National Treasurer (BPA; s.167). As a general principle for intergovernmental relations, consultation and cooperation were enacted to minimize disputes (PNG Constitution; Article 331). Implementation of the BPA was made a joint responsibility wherein the National Government does not have the powers to withdraw or suspend powers granted to the ABG but may only withhold grants for “systemic and widespread” financial abuse (ibid; Article 329).

¹⁰ This data has been provided by the ABG Department of Finance and Treasury

Ch.4 Fiscal decentralisation and autonomy

While the autonomous arrangement for Bougainville is unique to PNG, comparison may be made with the forms of financial arrangements for sub-national governments from elsewhere. The Spanish state comprising some 17 autonomous communities of varying size, population, and levels of economic development each with distinct ethnic groups – notably the Basques, Catalans, and Galicians who are linguistically and culturally distinct from the rest of the nation – has some parallels with PNG (Solsten & Meditz, 1990). The Spanish national government has exclusive jurisdiction over international affairs, justice, merchant shipping, civil aviation, economic planning, and finances where the Constitution acknowledges the rights of the autonomous governments to financial autonomy “for the development and exercise of their powers, in conformity with the principles of coordination with the State Treasury and solidarity among all Spaniards” (National Constitution of Spain; Section 156). Similar to the ABG, the autonomous governments are allowed to impose local taxes and levies and receive support from the State Budget (ibid; Section 157). Fiscal policy is coordinated across the nation state through a national agency (i.e. the *Council for Fiscal and Financial Policy*) composed of finance ministers from each sub-national government and from the nation plus the minister for public administration. The mechanisms for coordination also provides the national government control over the activities of the sub-national governments.¹¹

Direct budget support as an instrument for fiscal equalisation is losing flavour globally. Direct budget support between sovereign states as well as that to sub-national governments within larger federal structures is losing appeal. Governments at all levels are increasingly being required to balance their recurrent budgets. As an example, the Compact of Free Association through which the United States of America has historically provided budget support to the Republic of Marshall Islands, amounting to 20 percent of GDP from 2004, is due to expire in 2023 (IMF, 2016). Similarly, the grant-support provided by New Zealand to the Cook Islands in 2016 amounted to five percent of the total operating revenues.¹² This loss of favour with direct budget support is because such transfers are associated with poor fiscal outcomes for the recipients (Von Hagen & Harden, 1995).

There is considerable evidence from the international literature to show that fiscal incentives affect policy choices by sub-national governments. Rodden (2002) for example draws on cross-national data of developed, developing and transition economies for the period 1986 to 1996 to show that sub-national governments with wide-ranging taxing and borrowing autonomy are found to have balanced budgets over the long-term. Otherwise, the evidence is that the overall fiscal position deteriorates with an increase in intergovernmental transfers. Rodden (2002) argues that “free-spending sub-national governments have built up unsustainable deficits and called upon central governments to provide special bailout transfers or otherwise assume their liabilities” with adverse financial consequences on others and the nation at large (ibid, p. 670). Such an outcome is found to be particularly true following an adverse revenue shock where transfers to the sub-national level governments are legislated without explicitly taking into account such contingencies.

The experience of the ABG with regards to fiscal transfers from the national budget is consistent with the observations made from elsewhere. Table 6 presents data on per capita grants, calculated using figures for the total appropriations for 2017 from the national budget, and population as recorded in the Census of 2011. While the population in 2017 would be larger than in 2011 (by roughly 20 percent if the national rate is imposed on each of the provinces), I am assuming that this difference will be similar across the provinces thus the value of grants per capita will remain comparable across provinces. The National Economic and Fiscal Commission (NEFC) distributes resources across the provinces based on a holistic consideration of the cost of service delivery and the capacity to fund the recurrent budget from internal sources. Bougainville however is not included in the calculations of the NEFC (NEFC, 2013). Notwithstanding the above, the figures in Table 6

¹¹ The details on the financial arrangements are provided in the Organic Law on the Financing of the Autonomous Communities (Ley Orgánica de Financiación de las Comunidades Autónomas).

¹² See page 5 of Cook Islands Government Quarterly Financial Report of September 2016, available online at: http://www.mfem.gov.ck/images/treasury/Crown_Accounting/Reports/Quarterly_Financial_Rpts/2017/September_2016_Quarter.pdf

reveal that Bougainville received seven percent more in per capita grants from the National Budget compared to Manus, the second highest recipient, and nearly 50 percent more than the Western Province, the third highest recipient.¹³ The NEFC has also argued for the need to increase fiscal capacity, calculated as the ratio of revenue raised internally to the cost of service delivery, of the provinces to allow them to fund delivery of “critical services” (NEFC, 2013, p.5): this recommendation is just as relevant to the ABG.¹⁴

The ABG has received substantial support in the form of per capita grants appropriated from the National Budget. Data on the amount of grants disbursed are not available but would be critical to effectiveness of service delivery. Nonetheless, the comparatively large amounts of per capita grants provided to the ABG is due to the legacy of the limited fiscal capacity that was present in 2001 when the Peace Agreement was signed, the large demand for resources in the immediate aftermath of the conflict, and the formula legislated then for fiscal transfers. Cost of delivering services in Bougainville are high: Muller (2014) shows that the recurrent grant to Bougainville for 2011 would have been larger by K5 million if the average cost of service delivery for the nation was used, and K10 million if cost of service delivery for lower and medium funded provinces were used (p.20).¹⁵ In other words, grants provided to the ABG to fund basic services had fallen behind those for other provinces. While data on the level of per capita grants from the National Budget provided to the North Solomons Provincial Government prior to the conflict is unavailable, it would have been much lower and possibly at the bottom end of the provincial distribution given the substantial fiscal capacity then.

Some commentators have argued that the National Government is obligated to provide the ABG with grants in return for the revenues provided by the Panguna mine at PNG’s independence in 1975. While there may be a moral case for the above, the legal and economic basis for such an argument is weak. The National Government has legal obligations for fiscal support to the ABG as specified in the Peace Agreement and the enabling legislations. The economic case for the transfers is based on the concept of fiscal equalisation across sub-national governments (Blöchliger & Charbit, 2008), wherein the NEFC is given the responsibility to calculate the magnitude of fiscal imbalance between the revenue raising capacity and the cost of service delivery across provinces. While the mandate of the NEFC may not extend to the ARoB, it may still be important to clarify on the principles for fiscal transfers after the referendum.

Table 6: Per capita grants to Bougainville and Provinces in PNG

	Province/Region	Grants, ‘000 Kina (2017 Appropriation)	Population (2011 Census)	Grants per capita (Kina)
1	ARoB	256,576	249,358	1,029
2	Central	145,462	269,756	539
3	East Sepik	222,273	450,530	493
4	EHP	235,419	579,825	406
5	ENB	189,293	328,369	576
6	Enga	160,846	432,045	372
7	Fly River/Western	137,445	201,351	683
8	Gulf	86,041	158,197	544
9	Hela	137,089	249,449	550
10	Jiwaka	109,303	343,987	318
11	Madang	235,657	493,906	477

¹³ The projections on appropriations for Manus in 2018 of K21 million is roughly 36 percent of the appropriation for 2017 while the corresponding figure for the ABG at K128 million is roughly half the appropriation for 2017.

¹⁴ The costs of service delivery are estimated by the NEFC using district level data which then is aggregated to the level of the provinces.

¹⁵ I am grateful to Mr Suve for sharing with me the ‘Cost of services’ study done for the *National Economic and Fiscal Commission*.

12	Manus	58,065	60,485	960
13	Milne Bay	152,499	276,512	552
14	Morobe	274,027	674,810	406
15	NCD	43,444	364,125	119
16	New Ireland	98,947	194,067	510
17	Oro	89,888	186,309	482
18	Sandaun	147,055	248,411	592
19	SHP	188,677	510,245	370
20	Simbu	188,592	376,473	501
21	WHP	170,808	362,850	471
22	WNB	112,872	264,264	427

Source: Data on grants appropriated is from 2017 Budget Estimates for Statutory Authorities, Provincial Governments, Debt Services and Trust Accounts for the Year ending 31 December, Volume 2d; pp.305–333. Note that grants to the NCD for 2017 are roughly K100 million more than the figure for 2016 with the difference due to a one-off appropriation for ‘Domestic Interest Payments’ (ibid; p.309). This additional allocation for interest payments has been omitted from the calculation of per capita grants to the NCD.

The guaranteed access to finance from the centre by sub-national governments entails problems of the ‘tragedy of the commons’ (Velasco, 2000). That is, when the national budget is ‘common property’ then each sub-national level government has an incentive to spend more than what they would do if given the responsibility to raise their own finances. This problem of ‘over-spending’ by sub-national governments is exacerbated when voters suffer ‘fiscal illusion’; that is, where transfers from the centre are set by legislation (as that for the Restoration and Development Grant for the ABG explained in the previous section) and seen to originate from non-residents (i.e. non-Bougainvilleans). The problems of fiscal illusion and over-spending are made doubly serious when the beneficiaries fail to connect service delivery to taxes paid at the local level. Consequently, transfer-dependent sub-national governments face weak incentives for fiscal austerity *ex ante* and have an incentive to blame the national government for their failures *ex post*.

The national government may also have the incentive to use fiscal dependence of the sub-national governments for political control. Thomson (2006) for example argues that much devolution of power in Africa has involved the transfer of many responsibilities to sub-national governments but without the transfer of the requisite powers to make policies and generate resources to meet the new obligations. Consequently, devolution has had disastrous consequences for many communities in Africa. The efforts at decentralisation in Papua New Guinea, including the creation of the autonomous arrangement for Bougainville, in contrast have been a lot more successful in comparison to the efforts elsewhere. The Organic Law on Provincial and Local Level Government with regards to decentralisation in PNG in general and the BPA with respect to the ABG address many of the concerns regarding the transfer of powers for service delivery to local level governments. Access to financial resources to meet the newly handed down responsibilities is mandated by legislation. The BPA in particular provides the ABG the options to draw-down policymaking powers barring those relating to sovereign functions such as national defence, immigration and international trade. The resources to fund services which the ABG has taken responsibility for is guaranteed by the National Constitution (as explained in the previous section).

The extant fiscal regime as legislated in the Organic Laws and the two Constitutions however fail to fully reward the ABG for fostering growth of the local economy. The BPA does not contain a fiscal pact with clear milestones on progress in reaching fiscal self-reliance. The impending referendum has heightened awareness within the ABG for fiscal autonomy (rather than fiscal self-reliance as defined in the legislations). Regardless of the outcome of the referendum, the importance of fiscal autonomy is likely to remain pertinent for reasons of fiscal prudence and political expedience – issues that I elaborate upon next.

On fiscal prudence, the ABG will need to take greater responsibility for raising revenues for its own budget. There is evidence in support of the proposition that “direct democracy is positively related to some macroeconomic

indicators such as low state budgets, low budget deficits and low tax levels” (Feld & Savioz, 1997, p.507). There is also evidence to suggest that voter involvement in funding government activity improves the efficiency with which public services are delivered (Geys et al., 2010). A hard budget constraint will provide the incentive for the ABG for prudent fiscal management.

On political expedience, the political tensions between the ABG and the National Government with regards to fiscal transfers has been building for several years now. The approaching referendum will raise the tempo of debate on the need for fiscal autonomy. The impending referendum has also raised the urgency of attaining fiscal independence for political autonomy as otherwise fiscal dependence lends the opportunity for political control. The existing autonomous arrangement attempted to mitigate the risk of political control from the centre via legislating transfers from the national budget to the ABG. The BPA for example states that: “[t]he calculation and timely payment of the grant will be guaranteed by law” (BPA; para. 155). The National Constitution and the Organic Law contain explicit provisions for dispute resolution (PNG National Constitution; Section 331(b) and 333; Organic Law; Section 4(3)).

The referendum is a major watershed moment for the ABG when better fiscal management will be demanded. This would be the case regardless of the outcome of the referendum. Leaders in Bougainville will not be able to blame the national government for poor access to public services within the ARoB indefinitely, and not if more of the taxation powers are drawn-down. Accompanying the draw-down of the powers to tax production within ARoB will be the responsibility for the ABG to provide public goods that support market activity. A thriving local monetary-economy will provide the fiscal capacity to support increased political autonomy. Policymakers in PNG, including the ABG, have much to learn from the recent literature on Fiscal Federalism in terms of designing transfer systems that reward policies for growth of the local economy (Weingast, 2009). The international experience suggests that fiscal transfer systems can be designed to simultaneously achieve horizontal equalisation with fiscal incentives to expand the tax base of sub-national jurisdictions whilst preventing tax competition between them (ibid, p.284).

The existing autonomy arrangement attempts to strike a balance between self-rule and shared-rule through consultation and cooperation that is facilitated through the Joint Supervisory Body (JSB). Institutions were designed to resolve disputes through mediation and arbitration at first, and the use of the courts as the last resort (PNG Constitution: Articles 333–336).¹⁶ But these institutions have not prevented disputes regarding the level and timeliness of fiscal transfers from arising in the first place or resolved them afterwards. I have explained why these disputes may have arisen and presented reasons why the impending referendum provides the incentives to reach for fiscal autonomy. I now turn to the options for broadening the tax base.

¹⁶ There are strong parallels with the autonomous communities of Spain (see Agranoff, 1996).

Ch.5 Fiscal strategy to broaden the tax base

The discussions in this section are illustrative of the means that may be used to grow the monetised/formal economy and as a result broaden the tax base. It must be pointed out at the outset that the responsibility to: “recommend suitable economic development strategies and sound fiscal management policies to the Minister responsible for finance matters” and to: “carry out cost and benefit analysis on the development of all natural resources” rested with NEFC (*Organic Law on Provincial Governments and Local-level Governments*, 117 (8) iv&v), but this law has now been repealed.¹⁷ The NEFC, to the best of the knowledge of the author, has never provided such input to the ABG, and no longer has the legal mandate to do so.

The quantum of taxes collected, as explained in Section 2, is largely a function of the size of the economy. Taxes, in the words of one local leader, are akin to the harvest and relevant only after the garden has blossomed.¹⁸ In this context, I next consider some of the options available to the ABG to broaden its tax base while consolidating its legitimacy through fiscal management.

A good fiscal management strategy serves three functions; namely:

- a) it improves access to public services;
- b) it expands the tax base; and,
- c) it raises revenues for the budget.

While a comprehensive discussion on all options available to the ABG to target the above-enumerated are beyond the purview of this paper, I will next present three specific interventions that could be used to bring the government closer to the governed, and hasten progress towards fiscal self-reliance. Each of these will require detailed consideration before being translated into policy however.

Cocoa levy

Cocoa exports from Bougainville for 2014, produced by some 23,000 growers selling their produce to four major exporters, amounted to a total of K68 million.¹⁹ Based on these figures which are the most recent available, a tax of one percent on exports would raise K680,000 and equal to 1.6 percent of the recurrent grant provided by the National Government in 2016. While such a tax fails the third criteria listed above for a good fiscal management strategy it fulfils the remaining two. That is, the export tax on cocoa lends the opportunity to improve access to services and expand the tax base. Revenues raised from the tax could be spent on addressing the impediments to further expansion of production: this would be a growth-enhancing strategy. The ABG could monitor the success of their strategy by noting the increments in the level of cocoa exports over time. Besides, the tax would provide an incentive for the growers (who are spread from Buka to Buin and from Torokina to Tiniput) to unite (possibly by forming a growers' association) on a common endeavour of receiving the best value from their taxes. The cocoa export-tax would then link people in an industry across space and language groups. Additionally, the ABG would have to engage with the growers as a group, and in the process, bring the government closer to the governed. Furthermore, the administrative burden of the tax would be low since it can be readily collected from the four local exporters. Most importantly, policymakers would have to explain the rationale for the tax, its rate of one toea for every Kina of exports, and the fact that the sum collected would be spent to increase production. Thus, an export tax on cocoa provides revenues for growth of production which lend the opportunity to the ABG to engage with the community on the value of government services.

¹⁷ I am grateful to Mark Olsen for pointing out that this law has been repealed.

¹⁸ James Tanis, personal communication.

¹⁹ All cocoa grown in Bougainville is sent to mainland PNG where some of it is processed and the rest exported. For the purposes of the discussion that follows, local production is treated as being synonymous with exports.

Property registration levy

The second case is that of levying a fee for registering property and using the stock of registered property as the base to set municipal rates. The value of public goods such as access to infrastructure services, security and basic services is capitalised in the value of local property. The properties in Buka town are worth millions of Kina because of their proximity to public services including policing, the airport, the major hospital, the sealed all-weather roads, the Parliament and educational facilities. Property taxes provide a mechanism to link access to public goods provided at the local level to property values. The value of public amenities in Buka town, for example, is reflected in the property values there. This nexus between level of access to public services and property values provides the incentive to the local municipal authority to supply public goods of greatest value, and the public to pay for such supplies. Local taxes therefore bind public officials to the supply of public services that support private enterprise, and in the process, attract capital and create employment within the municipality. -The taxpayers benefit from this bargain through increased security that registration affords with the title being underwritten by the government (Timmons, 2005).

There are at least three more benefits of a good registry for property. First, and as alluded to earlier, good property registry that provides secure title to land and buildings located within the confines of the major urban centres has the potential to improve access to credit from the formal sector. Second, a functioning property registry is an investment in the legal capacity of the ABG which has the potential to bring the government closer to the governed. Third, a property registry provides data for urban planning that in turn would improve value of registered properties. Consequently, a levy on registering property has the potential to raise revenues for the budget, provide a service to the owners, and expand investment in the formal sector. That is, it serves all of the above-enumerated conditions for a good fiscal management strategy.

Access to temporary employment overseas

The third example is that of the ABG negotiating short-term access to the labour markets of Australia and New Zealand. While this initiative is unlikely to add to income taxes directly, it has the potential to improve access to services of the ABG and increase expenditure within ARoB, thus expanding the tax base. Improving access to overseas employment by the people of Bougainville mediated by the ABG and the National Government is timely given the announcement of the 'Closer governments and communities' initiative by the Australian Prime Minister at the 2017 meeting of the Pacific Island Forum which aims to connect workers to employers and training institutions such as the Australia-Pacific Technical College (APTC) to raise employment and income in Australia and the source nations. The Australian government has had a longstanding interest in building partnerships with the Pacific island nations to raise the rate of economic growth and improve resilience of island communities, and more specifically in supporting "[t]he Papua New Guinea and autonomous Bougainville governments to implement the 2001 Peace Agreement, which underpins peace and stability in Bougainville" (GoA, 2017, p.101). The ARoB is a fragile island community that would meet many of the aspirations of the proposed scheme.

Providing a thousand or so work visas to the people of the ARoB to work temporarily in Australia will reduce youth unemployment, raise income, and provide the means to and incentives for investment in education and skills development. The Seasonal Worker Program (SWP) that was launched by the Australian government in 2012 has allowed some 18,000 workers from Fiji, Kiribati, Nauru, Papua New Guinea, Samoa, the Solomon Islands, Tonga, Timor Leste, Tuvalu and Vanuatu to work within the agriculture, accommodation (in selected locations), and tourism (in Northern Territory) industries in Australia (ibid; 102). Seasonal workers from Kiribati, Nauru and Tuvalu are given work visas for nine consecutive months while the rest are allowed six months before being required to return home for a minimum of five months after which they may reapply to return on the SWP. These workers on average send home A\$5,000 per placement of six months which amounted to A\$13 million for Tonga, the largest source nation for seasonal labour, in 2016–17. The workers are also allowed to undertake additional training in First Aid, English Language, and numeracy and information-technology which are paid for by the Australian government. A thousand Bougainvilleans working in Australia for nine months

have the potential to remit A\$7.5 million (K19 million) home.

In addition to the SWP, Australia introduced the Microstates-Northern Australia Worker Program in late 2016 to allow citizens of Kiribati, Nauru and Tuvalu to work in Northern Australia for periods of up to three years. Prime Minister Turnbull announced two further initiatives at the 2017 Pacific Island Leaders Forum: (i) a new Pacific Labour Scheme is to take effect from July 2018 with an initial intake of up to 2,000 workers from the microstates for low and semi-skilled employment in rural and regional Australia, with access to the scheme to be progressively extended to the remaining Pacific island nations; and, (ii) a Pacific Labour Facility (PLF) that will connect skilling of workers in the islands to employment opportunities in Australia.

The PLF has particular promise for Bougainville as it provides the window of opportunity for high school graduates from Bougainville to pursue training in skills in demand in Australia through the Australia-Pacific Technical Colleges (APTC), or similar institutions in the region. These workers trained through the PLF have the potential to be productively employed on return to Bougainville when mining operations recommence. The ABG may consider working closely with the national government and the Australian government in creating a 'work-ready pool' of graduates from Bougainville for temporary employment in Australia such that they may be employed in a future mine in Bougainville. This will ameliorate the need to import workers from elsewhere when the mine opens, and in the process reduce one of the risks that led to the conflict in 1988. An early pilot scheme involving recruits from ARoB could provide the opportunity to policymakers to monitor the social and economic impact of the PLF in a fragile context, lending lessons beyond Bougainville.

There are social benefits of allowing workers from a post-conflict environment to live and work, albeit temporarily, in a developed country-context. Allowing youth from the villages to travel together and work in Australia temporarily has the potential to foster community links within Bougainville on their return home, raise income of the workers, and expose them to a well-functioning society. Contemporary Bougainville provides a unique opportunity to test the effectiveness of the PLF in building cohesion in a post-conflict situation, identify risks to the above, evaluate economic costs and benefits of temporary labour mobility in a post-conflict situation, and prepare a skilled workforce for Bougainville.

Last, the focus for 2018 'Closer Government and Communities Program' is on 'Bringing the Digital Revolution to the Pacific', which has relevance for Bougainville. Access to information including radio broadcasts is poor in Bougainville. Similarly, access to educational materials including textbooks is limited in the schools in the ARoB. Early adoption of digital technology could allow the ARoB to leapfrog the use of existing communications technologies in the delivery of primary education, basic healthcare and information services. There is a case for targeted assistance to Bougainville as part of an Australian strategy for resilience/peace building but such assistance is possible only through consensus and collaborations between the ABG and the PNG and Australian governments.

Ch. 6 Revenue needs of, and options for the ABG

This section seeks to encourage a discussion on the revenue envelope that the autonomous region of Bougainville would need under the current arrangements before moving to a discussion on the resource requirements for an independent nation of Bougainville. The focus for the subsequent discussion is on the recurrent budget given that the restoration and development needs of the ARoB are being met through national grants (including DSIP, PSIP and the Special Intervention Fund) and through donor funding. It is extremely difficult to ascertain how much revenue an autonomous Bougainville government would need but a figure of K300 million has been proposed.²⁰ The question then is as to how best to meet the shortfall of K138 million from the current budget ceiling of K162 million.

What then are the options to raise revenues for the ABG? In answering this question, I begin with the proposition that a good tax system is both efficient and equitable. Here “efficiency” implies that taxes distort economic behaviour to the minimum and incur the least administrative burden for a given amount of revenue raised. “Equity” implies that the burden of the tax is shared fairly such that individuals in similar circumstances have the same liability while those having the greater income bear a larger burden of the tax. Furthermore, taxes must apply to all, stimulate savings and investment, and be transparent such that they promote confidence in the ABG. Recall from section 2 that the room to ratchet up tax rates is limited by subsistence production which provides room for economic activity to move between the formal and informal sectors. In these circumstances, taxes can change the mix between these two sectors and thus create inefficiency. A raise in the rate of taxes, for example, will induce a shift of production to the informal sector thus lowering tax compliance.

Tax compliance will be a challenge in any case, given the large informal sector and a population with low rates of literacy. This argues for a tax system that has low rates and is administratively simple to implement. The longer-term focus for revenue and tax policy, as argued in Section 5, are to raise marketed economic output. While this strategic goal must be kept in mind, the options for raising revenues in the short to medium-term are limited to personal income taxes, trade taxes, property levies and resource rents. Each of the above is explained in some detail next.

- (i) Current laws allow the ABG to receive tax on personal income generated in Bougainville, which is paid into a trust account by the PNG Internal Revenue Commission (IRC) and then distributed to the ABG (Organic Law, s.41). All of company taxes together with customs duties collected in Bougainville plus 70 percent of value-added tax receipts are to be placed in separate trust accounts created by the National Minister responsible for internal revenues and then credited against the annual recurrent unconditional grants from the national government to the ABG until fiscal self-reliance is attained (Organic Law; s.39). The Organic Law permits the ABG “to impose, set rates of and collect personal income taxes in Bougainville” after restoration has been achieved (Organic Law, s.41(5)); set personal income tax rates within five percentage points of the national rate (*ibid*, s.41(4)); and set company tax rates within five percentage points of the national rate following attainment of fiscal self-reliance (*ibid*, s.43).

The ABG is empowered to set excise taxes and licence fees, property taxes, motor vehicle registration charges, road user fees and “such other taxes as ever have been available to a Provincial Government under the Organic Law” (BPA, article 145; Organic Law, s.44). The actual collection of taxes is left to the IRC until such time as the ABG has established its own tax office (Organic Law, s.45).²¹ These laws imply that sovereign Bougainville will have greater flexibility in setting the rates of income and company taxes, but

²⁰ This figure was mentioned by the Minister of Finance as part of the discussion following the presentation of an earlier draft of this paper at the House of Representatives in Buka.

²¹ The ABG has established its own tax office which administers the Bougainville Sales Tax (Beer and Cigarettes) Act 2011.

the rates prevailing in PNG and the Solomon Islands would still matter given the porous nature of their borders. More specifically, tax rates in Bougainville will have to be similar to those in her neighbours if the leakage of the tax base is to be avoided.

- (ii) Customs duties can be imposed on (non-PNG sourced) imports into the AROB following agreement with the Internal Revenue Commission (IRC) (Organic Law; s.45(b)).²² The incentives for the ABG to collect customs revenues before attaining fiscal self-reliance are weak however. This is because all of customs revenues collected, as explained earlier, are held in trust and offset against the recurrent grants from the National Government. Even after attainment of fiscal self-reliance, the revenues are shared between the ABG and the National Government. But enforcing compliance with trade taxes is helped by the fact that the bulk of cargo is channelled via the three major ports (i.e. Buka, Kieta and Buin), meaning that trade taxes are administratively simple to collect. The case of cocoa exports has already been explained with the caveat that the rate would have to be low with demonstrable benefits to the taxpayers so as to expand production and encourage voluntary compliance. While an independent Bougainville will no longer require approval from the IRC to set trade taxes, the porous border between Bougainville and the rest of PNG (and the Solomon Islands) means that these rates would have to be aligned with those for PNG. The value raised from trade taxes will depend on the level of trade between Bougainville and the rest of the World, excluding the rest of PNG.
- (iii) Property taxes as explained briefly in the previous section, registered property may form part of the tax base but this will be confined largely to urban real estate. The proceeds from property taxes may be used to fund public infrastructure, which in turn would improve the conditions for private enterprise. Investments into public infrastructure including in policing will benefit the owners by raising the values of their properties.

Property taxes can be developmental. An efficient property registry housing cadastral surveys provides the information to issue secure title to urban land. There is evidence to suggest that privately owned property enables households to save, invest, and partake in the free market exchange for their benefit (Di Tella, Galiani, & Schargrodsky, 2007).

The municipal authorities in Buka, Arawa and Buin may be able to set their own rates of property taxes. Such decentralised property taxes are relatively simple to administer, the taxes are progressive in that they are paid by the relatively rich in the community, and they may create competition across municipalities for better public services. An advantage of property taxes is that it demands investments into the necessary infrastructure to collect the taxes, which in turn strengthens the state bureaucracy and provides the information for urban planning. The rapidly expanding town of Buka can benefit from such planning.

Buka, Arawa and Buin all have small real estate sectors and each of these urban centres has the potential for further expansion. A transparent process for registering property that in turn provides trustworthy titles is a service that the community would value, but a secondary benefit of the above would be a tax base for generating government revenues. Such a registry would reduce the levels of dispute, and create demand for a legal system that undergirds record keeping with benefits to the community at large. Incentives may be created for the local level governments such as municipal authorities in Arawa, Buka and Buin to raise revenues from registered property (Khan, Khwaja, & Olken, 2015), and the major urban centres allowed to compete on this basis to attract private enterprise (Petmesidou, 1996). While such investments are critical to growth of GDP, the rates of tax must be kept low to provide incentives for owners to register their properties in the first place. This means that property taxes are likely to be a minor source of revenue for the ABG in the immediate term. And at least in the initial phase, the registries are likely to have a role only in the urban centres of Buka, Arawa, Kieta and Buin given that the remainder of Bougainville has most of its land held under customary tenure.

²² The BPA and supporting legislation specify the IRC as the agency responsible for collecting customs duties but these powers have subsequently been transferred to the newly created PNG Customs Service.

(iv) Resource rents tax including fees for licenses to fish and mine (including alluvial gold) provide an immediate source of government revenues.

- (a) Fishing resource rents – The Peace Agreement states that fishing revenues generated from the waters of Bougainville will be distributed to the ABG on an agreed formula (BPA; s.86(a)). The ARoB has a large marine reserve comprising healthy stocks of tuna, sea cucumber and other mixed species of harvestable living aquatic resources.²³ The BPA allows representation by the ABG in negotiations for access to fisheries within the Exclusive Economic Zone (EEZ) and the continental shelf of Bougainville (BPA, Section 85a) as well as in “bodies responsible for determining total allowable catches, licence numbers, and reservation of licenses for domestic fishers” (BPA, Section 85b). The revenues collected from the above is to be shared with the ABG on “[a]n agreed formula” (BPA, Section 86).

The waters associated with Bougainville are already a significant source of tuna fisheries. The daily catch based on data from the Secretariat of Pacific Community (SPC) for 2013, the most recent available, is 160 metric tons of Skipjack tuna per day plus unspecified quantities of the more expensive Yellowfin tuna. While no reliable data is available on the value of fisheries rents generated in the waters associated with Bougainville, it is reported that some 30 percent of the total annual catch of around a billion Kina in value is sourced from Bougainville.

The ABG may utilise its powers as legislated under the BPA to access the resource rents that are currently collected by the National Fisheries Authority of Papua New Guinea. The revenue sharing arrangement is still to be negotiated and will require agreement with and the support of the National government. The ABG, in protecting its aquatic resources, may also consider drawing down powers to sustainably manage its fishery resources with a view to having fisheries rents as a major and sustainable source of revenues for its budget.

How much rent can the ABG anticipate from its tuna fisheries? The value of fisheries rents collected as a proportion of the value of total catch within the tuna fisheries of the Western and Central Pacific varies between four percent and 13 percent (Bertignac et al., 2000), meaning that tuna fisheries rents accruing to the ABG could range from K30 million to K130 million per year. In other words, fisheries rents alone could fund 60 percent of the recurrent budget of the ABG.

There is the potential to create employment in Bougainville through onshore processing of tuna caught in the waters of Bougainville. The lessons from PNG are informative in this regard. As of 2017 some 2,000 metric tonnes of fish were being processed onshore in PNG, creating some 40,000 jobs where approximately 90 percent of the employees are females. There is currently no onshore processing of tuna in Bougainville. Given the large catch of tuna from the ARoB waters and the significant pool of unemployed in Bougainville, there is potential for tuna processing on mainland Bougainville. But onshore processing of tuna in Bougainville will require large foreign direct investment (FDI) in plant and equipment, which in turn will need both time and supportive FDI-policies.

There is the potential for exports of high value marine products. Bougainville was a source of exports for dried sea cucumber (Beche-de-Mer) which ended in 2010. There was a revival of this industry in 2017 with exports of 96 metric tonnes with a total value of K3.92 million. Further growth of this fishery requires foreign direct investment to improve quality of the product and supportive policies for the sustainable management of this resource. There is an opportunity to use an export tax for Beche-de-Mer to fund reseedling and a management plan that raises community awareness on the sustainable use of this fragile resource.

²³ The data on fishing resource rents is drawn from the presentation made at the Revenue and Tax Summit by Thomas Betitis (Secretary for ABG Department of Primary Industries), Mahara Auhi (Director, Fisheries, Department of Primary Industries), and Richard Mounsey (PGF Adviser) in Buka on 28 September 2017.

- (b) Mineral rents – There has been a long-held belief in the utility of mineral rents in funding an autonomous and even an independent government in Bougainville. While mineral rents can be a ‘short-cut’ to fiscal-self-reliance, the risks of such a strategy in stifling economic growth are significant. The risks to an economy and a government reliant on mineral rents to fund public goods are many including: (i) the shift in priorities for redistribution rather than that for inclusive growth; (ii) the potential for adverse effects on other tradeable parts of the economy (i.e. the Dutch disease effects); and (iii) the vulnerability to sharp movements in global commodity prices. Readily available mineral rents can also crowd out other forms of taxes leaving government finances dependent on a single source of income. The risks of redistribution in the ARoB from the recommencement of large-scale mining, as explained in Section 2, are significant. A full coverage of the risks from Dutch disease effects and those relating to volatile commodity prices are beyond the purview of this paper but would have to be considered at some stage.

I will next discuss small-scale mining and then large-scale mining as potential sources for government revenue. There is artisanal small-scale mining in Bougainville that emerged in the late 1990s as a source of cash income to pay for store-purchased goods such as food, fuel and building materials plus purchase of vehicles, and to contribute towards cultural obligations. This source was particularly important in the immediate aftermath of the decade long conflict since alternate sources of cash income had been destroyed. While official estimates of the level of production is not available, O’Faircheallaigh et al. (2017) use survey data to estimate annual gold production for 2016 of approximately one ton and worth between K75 million and K100 million. This makes small-scale mining the second largest industry, after cocoa, in terms of the value of exports. Furthermore, it is an industry that continues to provide lucrative returns to the miners – albeit at the neglect of health, environmental and social costs – and therefore has prospects for further expansion (ibid). Specialised inputs such as mining equipment and chemicals (mercury and nitric acid in particular) which are commercially imported may be taxed. The proceeds may be used to address the social and environmental costs arising from mining, thus providing an opportunity to bring miners under the regulatory umbrella.²⁴ The *ABG Mining Act 2015* recognises ownership of minerals by the landowners, meaning that no royalties can be collected but community governments and village assemblies may impose licence fees of up to K1,000 for their designated mining areas. A tax of 10 percent on the value of production presented above would generate annual revenues for the budget of up to K10 million. But collecting the tax is likely to be difficult given that gold can be illicitly mined, concealed, and smuggled out. In summary, mineral rents from small-scale mining is unlikely to be a significant source of revenues for the budget.

What for large scale mining? I will consider the prospects for revenues for the budget from the reopening of the Panguna mine next. The proposal for the recommencement of mining in Panguna is at the feasibility stage (which is envisioned to last to the end of 2019) therefore estimates on the viability of this project, the levels of project funding, profitability of the mine, and the revenues generated for the ABG are all speculative.²⁵ The cost of construction is estimated at US\$4–6 billion, the funds are likely to be sourced internationally, and the costs of raising this sum will depend on the perceived level of sovereign risk. The mine will become operational in 2025 under the most optimistic projections, and is estimated to have an operating life of 25 years. Under prevailing fiscal arrangements, the Panguna mine when fully developed and operational could generate tax revenues of US\$550 million per annum. The project was stalled as of 2017 due to a dispute amongst the landowners of Panguna, and the ABG placed an indefinite moratorium on

²⁴ Kumar and Amaratunga (1994) provide a fiscal regime with incentives for socially beneficial artisanal small-scale mining while Geenen (2012) presents the challenges of formalising artisanal mining, drawing on the experience of the Democratic Republic of Congo.

²⁵ The data for this paragraph, including the claim of the speculative nature of this information, is drawn from the presentation made by representatives of Bougainville Copper Limited at the Tax and Revenue Summit on September 28 in Buka.

mining in Panguna in January 2018.²⁶ There is uncertainty regarding the tax regime that will apply after the referendum when the mine will, if at all, become operational. The construction phase of a large mine will create economic activities that will raise imports and employment with a flow-on effect on tax collections for the ABG.

Many challenges remain to be resolved with regards to reopening the Panguna mine. These include resolving the pre-existing conflict on compensation to the landowners as well as those adversely affected by the tailings. Negotiations for the reopening of the mine will bring back to prominence the actors and the issues that led to the conflict, with the potential to draw the ABG and the elite into contests over entitlement to and dissipation of mineral rents (Kurrild-Klitgaard & Svendsen, 2003; Olson, 1993). There are reports of the representatives of the landowners negotiating independently of the government to access mineral deposits by international prospectors. The impending referendum and the uncertainty in terms of the outcome will raise the risk premium to any investment in the ARoB. Investors contemplating a large resource project in the ARoB will factor in sovereign risk when considering the viability of their investment meaning that the valuation attached to a project before the referendum is likely to be lower than that after the outcome is known. For its part, the ABG's negotiating position is likely to be weakened by limited information on the value of the resource, uncertainties regarding the outcome of the referendum, and its well-known desire for fiscal self-reliance. Thus, the task for the ABG in getting maximum value from an investor in large scale mining in the ARoB is challenging to say the least with ramifications on when fiscal self-reliance is achieved.

There are prospects for mining outside of Panguna, but developing these sites will take time. The risks in tapping into mineral rents for fiscal self-reliance can be managed through early decisive actions on the part of the ABG. The government may consider taking the following steps towards maximising the proceeds from the recommencement of large-scale mining. The first would be to put in place laws that provide certainty regarding the security of investments following the referendum. The government may for example legislate that the conditions entered with an investor prior to the referendum will remain in place regardless of the outcome of the referendum. Second, an international financial institution such as the Asian Development Bank (ADB), the Asian Infrastructure Investment Bank (AIIB), or the World Bank could be engaged to intermeditate between the ABG and the investor into a mine to facilitate the design of regulatory infrastructure and promote competition for access to the resource that is necessary to maximise the proceeds to the government. International financial institutions have the knowledge to intermeditate between the public and private sectors of the economy and a reputation to protect in delivering value for the investors and the owners. Third, the people must be engaged on the issue of mining so that they come to an agreement whereby the ABG is lent the sole authority to negotiate access to mineral resources in the ARoB. Otherwise, the rents will get dissipated through competition between claimants of the resource. A detailed consideration on each of the above points is beyond the purview of this paper.

In summary, mineral rents have the prospects to serve as a source of revenues for the ABG but this is likely to be a long-term proposition given the long gestation period for the establishment of a mine and the lag before profits are realised. Income taxes generated through employment in the construction of a new mine, or the rehabilitation of Panguna mine, and taxes from support services provide an immediate source of revenues for the budget but their magnitude is likely to be small.

²⁶ See new coverage on this by the Australian Broadcasting Commission of 8 January 2018 at: <http://www.abc.net.au/news/2018-01-08/bougainville-mining-moratorium-panguna-site/9311022>.

Ch. 7 Revenue requirements of an independent nation of Bougainville

The discussion thus far has considered fiscal autonomy for an autonomous government in Bougainville. I have used the figures for the 2017 ABG Recurrent Budget to calculate the gap between the grants received from the national government and the revenues generated within Bougainville in discussing means to filling the void. But the referendum provides an option for a vote for independence. Consequently, consideration must be given to the question of the resource requirements for an independent nation of Bougainville. I will, for simplicity, focus on the financing requirements of sovereign Bougainville to the neglect of human capital necessary to deliver public services. There is not another independent Bougainville so I will consider the case for four Melanesian nations; namely, PNG, Fiji, the Solomon Islands and Vanuatu to generate figures for the size of the recurrent budget of sovereign Bougainville.

Is sovereign Bougainville viable? Table 7 provides some basic facts on the ARoB and her Melanesian neighbours. ARoB is part of PNG with a land area roughly two percent and a population roughly four percent of the national total. But compared to the remaining Melanesian nation states, the ARoB has nearly half the total land mass of Fiji and a third of its population, nearly a third the land mass of the Solomon Islands and half its population, nearly three-quarters of the land mass of Vanuatu and a population that is 10 percent larger. Thus at least in terms of land area and population, an independent Bougainville will not be the smallest Melanesian nation and definitely not the smallest Pacific Island nation. A politically independent Bougainville will however be the poorest Melanesian state in terms of both aggregate and per capita GDP and possibly with respect to each of the social indicators of development listed in Table 7.

A rough guess on the resource needs of an independent Bougainville based on the facts presented in Table 7 are that this will range from a level of 50 percent of the Solomon Islands to 110 percent for Vanuatu. But let us begin with a comparison with the PNG nation. The ARoB constitutes 4 percent of total population of PNG and should this share of the national total expenditure of K14.762 billion be apportioned to an independent Bougainville then it will amount to K590 million, or twice the total budget of K286 million for the ARoB in 2017.²⁷ Similarly, using population as the weight in computing the size of the budget for an independent Bougainville by drawing on the budgets of Vanuatu and the Solomon Islands gives estimates of K923 million and K836 million, respectively, on the basis of the official exchange rate as of 14 September 2017. These rough ballpark estimates show that the resource cost of political independence is likely to be anything between two to three times the total budget of the ABG for 2017.

The figures above reveal that Bougainville bears the smallest cost of sovereignty when being part of PNG. That is, the cost of sovereignty for ARoB using figures from the Solomon Islands and Vanuatu are approximately three-fold. This difference is due to the economies of scale in the provision of sovereign services such as defence, national regulation, currency and foreign affairs. These plus many other overhead costs of governments are indivisible and, hence, cannot be scaled down with the population. There are additional benefits for Bougainville in being part of PNG including the benefits from free trade and commerce with the rest of the nation. Access to a large and expanding market comprising some 7.5 million people of Papua New Guinea and the large (recorded as well as unrecorded) fiscal transfers from Port Moresby confer benefits that a sovereign Bougainville will lose. Besides, an independent Bougainville will be a lot more dependent on international trade given the narrow range of commodity exports – tuna and cocoa mostly, the income from which will fund imports of food, manufactures and services (Briguglio & Kisanga, 2004). The case of Greenland with a population of 56 thousand and per capita GDP of approximately US\$36,000 (figures for 2016), is instructive in this regard. The autonomous island government relies on annual transfers of approximately half a billion US dollars (ie US\$10,000 per person) from the Danish government to fund its budget.²⁸

²⁷ The Joint Review of 2013 estimated the “need in excess of K300 million to operate [ABG] at the equivalent level as today” (Go-PNG, 2013 Paragraph 7.2.7).

²⁸ See companion study on ‘Options for Bougainville’s autonomy arrangement: A study from a global comparative perspective’, (Kossler et al., 2018).

I have used the recurrent budget for 2017 to assess the revenue needs of an independent Bougainville. This may be inappropriate if the mix of expenditures for sovereign Bougainville are different to an autonomous arrangement. I compare the sectoral composition of expenditure for the four Melanesian nations shown in Tables 5 and 6 to assess the expenditure priorities in the ABG Budget for 2017. The top five items of expenditure in the budget (and their shares in total outlays) are:

- Education – accounting for 39.9 percent of the total recurrent budget;
- Personal Management and Administrative Services – accounting for 18.8 percent;
- Police, Corrective services, and Justice – 6.5 percent;
- Parliamentary Services – 5.6 percent; and
- Community Government – 3.4 percent.

The allocation to education in the ABG-Budget is comparable to that of Vanuatu, but twice that of PNG as a whole. Such allocation may be justified on the grounds of a large youth population and the fact that many children missed out on schooling altogether during the crisis – the so called ‘missing generation’ (GoPNG, 2013). My analysis of 2011 based on survey data shows that the probability of a six-year-old ready to enter school in Arawa completing secondary education by age 18 was just 11 percent (Chand, 2011). That is, just one in nine children that entered Grade 1 in Arawa made it to Year 12. Arawa is an urban centre with relatively well-developed public facilities meaning that access to education in rural regions of the mainland and the atolls is likely to be worse. Consequently, there could be considerable latent demand for school education.

Similarly, the allocation in the budget to Health is one-fourteenth that of Vanuatu and one-ninth that of PNG as a whole. Part of this difference may be because some of the health and education services are funded at the national level, and therefore remain ‘off-budget’ for the ABG (as explained in Section 3). Furthermore, churches and other non-governmental organisations also provide education and health services. Including these outlays will inflate the recurrent budget. The large allocations to health and education call for estimates on the effectiveness with which inputs into these sectors are translated into social outcomes. As an example, there is an urgent need to estimate the effectiveness of inputs into education in raising educational outcomes for the population of the ARoB. Similarly, the effectiveness of health outlays in reducing maternal and infant mortality needs to be estimated.

The leaders of sovereign Bougainville will have the opportunity to use the budget as an opportunity to build a consensus on taxation and supply of public goods between the governed and the government – the government budget in this particular sense serves as the linchpin of the state (Ghani et al., 2007). The formulation of the budget and the setting of priorities therein provides an opportunity for public engagement. The ABG parliament is a forum for the setting of such priorities, but the wider public may be invited to contribute to the prioritisation process to build empathy for higher taxes in return for better public services. The current government in Fiji for example solicits input from the public via the media in the formulation of the budget and then holds summits to explain the priorities in all major urban centres after the budget has been passed by parliament. The print and voice media are both used to communicate the priorities of the Fijian government and to gather information on the effectiveness of past expenditure. The ABG may want to draw lessons from the above in bringing government closer to the people and in building a more politically engaged public.

To summarise, the last two sections have been devoted to some simple arithmetic on the resource needs and revenue raising capacities of an autonomous as against an independent nation of Bougainville. My preliminary estimates suggest that: (a) Bougainville is well short of reaching fiscal self-reliance; (b) the resource needs of an independent nation of Bougainville is twice to treble the current level of expenditure; and (c) that rents from fisheries provides the shortest route to improving fiscal self-reliance but accessing the funds will require agreement from and cooperation with the PNG National Government. Resumption of large scale mining, in contrast, is a longer term proposition and has major risks in terms of tying the ABG into policies of redistribution and conflict mediation rather than having a policy-focus on growing the revenue base for the ABG. As to whether the risks are worth the rewards is a decision that only the people of the ARoB can make.

Ch. 8 Conclusions

The objectives of this study were to provide a succinct summary of the progress made on, and options available to, achieving fiscal self-reliance. To this end, the first part of the paper was devoted to assessing the progress made to date in reaching fiscal self-reliance, including an assessment of the potential sources of revenues to the ABG to hasten progress towards fiscal self-reliance. We explained the limited potential mineral rents have in contributing towards achieving fiscal self-reliance given the timeframe for the referendum. The issue of fiscal autonomy – meaning the capacity of the government to fund its budget – and that of economic viability of an autonomous/independent Bougainville will remain relevant regardless of the outcome of the referendum.

The Autonomous Region of Bougainville (ARoB) is due to hold a referendum before mid-2020 where the people will have an option to vote for independence from Papua New Guinea. The question addressed here is as to how best to transition the ABG to fiscal self-reliance which is defined in the legislation as having being achieved in “the first year in which the revenues from company tax, customs duties and 70% of value added tax collected in Bougainville are equal to the value of the recurrent grant on a sustainable basis” (GoPNG, 2001; 2002, p. s.2). The analysis in this paper reveals that the ABG had covered six percent of the ground to fiscal self-reliance, as defined above, by 2016 and that fiscal self-reliance will not be attained by mid-2020, the final due date for the referendum. On fiscal autonomy, calculated as the share of the recurrent budget funded from all internal sources plus the K100 million arising from fishing in the waters of Bougainville, the total revenues for 2017 amounted to K123 million which is 76 percent of the recurrent budget of K162 million for 2017. The 76 percent figure is indeed optimistic given that the ARoB receives several off-budget transfers from the National Government.

The impending referendum places a premium on attaining fiscal autonomy. Progress on achieving fiscal self-reliance therefore will remain relevant in the lead up to, during and after the referendum. My crude calculations suggest that a politically independent Bougainville will need anything between double to treble the finances of the current autonomous government. These considerations raise questions as to whether a vote for independence from Papua New Guinea is moot absent fiscal autonomy. The answer is not necessarily in the affirmative since sovereign Bougainville could choose to have less basic services for political independence. It also raises questions on whether donor funding could be secured for budget support while the tax base and the economy expand. The approaching referendum has raised awareness within Bougainville of the need to hasten progress towards fiscal self-reliance.²⁹

Grants to the ABG were deemed essential in 2001 when the Peace Agreement was signed. The system of fiscal transfers from the centre were designed to fill gaps wherein the national government was required to provide fiscal transfers on a predetermined basis until fiscal self-reliance was reached. The economy then was in shatters. The Panguna gold and copper mine, the largest source of exports and employment in pre-conflict Bougainville, had been closed for two decades. Cocoa and copra production had collapsed. The grants were legislatively mandated to fund the rebuilding of the destroyed infrastructure and the restoration of public services. There has been ongoing debate between the ABG and the National Government regarding compliance with the legislated fiscal transfers. The institutional mechanisms put in place in the legislation for the resolution of disputes have failed.

The ABG has made little progress in broadening its tax base. This may be because ‘gap-filling’ fiscal transfers dampen the incentives to do so. International experience shows that extensive tax sharing arrangements with the national government for fiscal equalisation limit both the autonomy of the sub-national level government and lower its responsibility to deliver basic services to the people (Geys et al., 2010; Rodden, 2002). The mandatory nature of grants from the centre may have allowed the ABG to blame the national government for the lack of access to resources to expand access to basic services within the ARoB. The strained relationship between the national government and the ABG are in hindsight of little surprise. The impending referendum changes these incentives. The legislated mechanisms for fiscal transfers could expire following the referendum. Furthermore,

²⁹ Hon Robin Wilson, the ABG Minister for Finance stated at the presentation of the earlier draft of this paper at the House of Representatives in Buka on 26 January 2018, has set a target of raising K300 million by 2019.

the vote for independence may be hollow without fiscal autonomy. The ABG is in a haste to broaden its own tax base with a view to funding its budget from internal sources. Identity politics that was at the very centre of the civil war may once gain provide the opportunity to devise taxes and expenditure policies as part of state-building (Feldman & Slemrod, 2009).

The literature on fiscal federalism reveals that sub-national governments who raise revenues from broad and relatively uniform taxes on general economic activities are far more likely to choose policies that foster markets compared to their counterparts who draw on (mineral or monopoly) rents (Weingast, 2009, p. 287). The ABG does not have the time to expand economic activity to reach fiscal self-reliance by mid-2020 when the referendum is due. Revenues received from licences issued for fishing tuna in Bougainville waters could provide an immediate opportunity to fund approximately half of the recurrent budgets, but securing these revenues requires agreement with and cooperation from the National Government. Mineral rents have the potential to supplement revenues for the ABG after the referendum, but this option is fraught with danger. There is the risk from the recommencement of large scale mining that the ABG will be caught in redistribution of mineral rents at the neglect of broad-based growth of the economy. Besides, the uncertainty regarding the outcome of the impending referendum will raise sovereign risk that will reduce the value of mineral rents available to the Autonomous Bougainville Government (ABG). And an ABG negotiating for access to the natural resources for fiscal self-reliance in the lead up to the referendum will be in a weak bargaining position with a large (international) investor. An option worthy of detailed consideration is to engage an international financial institution that would be able to inter-mediate between several international investors and the ABG so as to secure the maximum possible rents for the people of Bougainville.

The longer-term focus must be on expanding the monetary economy. I have argued for revenue and tax policies to be used to expand production. Tax collections can be raised by raising the level of economic activity, and through the widening of the tax base. On the former, revenue and tax policies need to be judged on their effectiveness in supporting economic activity rather than by the quantum of funds they deliver to the government. On the latter, a rise in the rate of taxes dampens incentives to engage in economic activity, and if so then it pushes such activity into the informal sector. The capacity of a weak administration to enforce compliance with taxes in any case are limited, thus ratcheting tax rates to raise revenues can be counterproductive.

Taxes can be used to support economic growth. Three specific examples have been used to illustrate the above; namely: (i) a one percent levy on cocoa exports with the proceeds being used to expand production; (ii) a property registry to provide the legal infrastructure for growth of private enterprise; and, (iii) a labour export scheme that allows people from the ARoB to seek temporary employment in and exposure to government services in Australia. These are specific examples of policies to improve service delivery, cement ties between the government and the governed, and broaden the tax base. The success of these policies is to be judged in terms of incremental gains to GDP.

The challenge for contemporary Bougainville is that of achieving a balance between the needs for local autonomy in the supply of public goods in an increasingly inter-dependent world. Political independence is an extreme position on the continuum to the current autonomous arrangement. Sovereign Bougainville will have to provide national services including defence, border-control, and possibly a new currency which are currently provided for PNG as a whole. The people will decide at the referendum on the level of autonomy desired, and they may choose to forego some of the existing services for the above. But this is a decision best made with information on the prevailing level of fiscal self-reliance and the path to achieving fiscal autonomy.

Table 7: Revenue and Expenditure data for Bougainville (ARoB), PNG, Fiji, the Solomon Islands and Vanuatu

	ARB	PNG	Fiji	Solomon Is	Vanuatu
Basic facts (figures for 2016)					
Land Area (sq. km)	8,990	452,860	18,270	27,990	12,190
Population (thousands)	≈300	8,084	899	599	270
Population ages 0-14 (% of total)	>34	37	29	39	37
Urban population (% of total)	..	13	54	23	26
GDP per capita, PPP (US\$)	..	2,761	8,800	2,129	3,047
Social indicators (2015, latest available)					
Life expectancy at birth, total (years)	..	63	70	68	72
Maternal mortality ratio (modelled estimate, per 100,000 live births) ..215	30	114	78		
Mortality rate, under-5 (per 1,000 live births)	..	45	19	24	23
Literacy rate, adult total (% of people ages 15 and above)	..	63	85
Recurrent Government Expenditure (2016)					
Total (% of GDP)		27	37	43	17
Education (% of total expenditure)	34	7	13	10	34
Health (% of total)	1	9	7	4	14
Police/Law and Order (% of total)	6	7	4	3	8
Revenues and Taxes					
Net ODA received (% of GNI; 2014)	..	3.5	2.2	18.1	12.3
Revenue (% of GDP; 2016)	..	23	32	43	18
Direct and Indirect taxes in total Revenue (%; 2016)	7	79	86	81	79
Direct and Indirect taxes in Recurrent Expenditure (%; 2016)	13	68	78	70	80

Notes: Data on 'Basic Facts' and 'Social Indicators' are for the most recent period available from the World Development (online) database accessed on 7 September 2017 with the exception for ARB where data on population is from Regan (2014) and Population less than 14 years of age is for the urban population (from Chand, 2011). Data on 'Recurrent Government Expenditure' and 'Revenues and Taxes' are from the national budgets of the respective countries, accessed online on 8th September 2017; '..' indicates that no data is available, and, exercise caution in interpreting these figures as they have been drawn from disparate sources with each lacking precision. The figure for nominal GDP for the Solomon Islands (to calculate the ratios) is from the CBSI (online); recurrent expenditure on Education in PNG includes that for the Department of Higher Education, that for Health includes Hospital Management Services – which is provided in ARB plus all provinces, and for Law and Order includes all Law and Order agencies. Recurrent revenues and expenditures for the Autonomous Region of Bougainville (ARB) is from the 2017 Budget kindly supplied by the ABG Department of Treasury and Finance.

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