



Designing Effective Regulation for the Pacific Context ¹

1 Introduction

Until recently, telecommunications services in most Pacific Island countries were provided by a public (or partially publicly-owned) monopoly. This arrangement allowed each government a high degree of control over pricing, service types, and access. However, changes in technology and the opening of Pacific Island economies to increased private sector participation and competition have led to new models of telecoms service provision.

As Pacific Island countries begin to liberalise their telecommunications sectors, governments will want to understand their options for ensuring satisfactory telecoms prices and services. These options include designing appropriate regulation.

An important consideration for regulatory design is local capacity to effectively undertake the necessary regulatory functions. Regulatory bodies can be expensive, and require highly trained staff. For many Pacific Island countries, such high financial and human resource requirements are a significant burden.

In the face of resource constraints, economising on scarce and specialised skills by creating a multi-sector regulatory organisation, or a regional regulatory organisation—or a regional multi-sector organisation—can be good options. But there are also other “design” options for limiting the overall demand for skilled personnel and financial resources. These options include developing low-discretion rules that do not require a highly-trained discretionary organisation to apply them, and creating a very “light” regulatory unit that effectively shares permanent resources and outsources more specialised activities.

This short paper begins by outlining the regulatory functions needed to reap the benefits of liberalisation. It then discusses regional regulation, multi-sector regulation and other regulatory design options, noting some of the benefits and difficulties associated with each approach.

2 Liberalisation creates new regulatory challenges

When governments own essential service providers such as telecommunications operators, they have a direct route for exercising control over the types of services offered, who these services are available to, and at what price the services are provided. In the past, governments have seen this type of control as important for ensuring that the services are responsive to peoples’ needs and preferences—which generally means ensuring universal or widespread access to adequate services, and ensuring that services are affordable.

However, government departments generally lack the incentives and expertise to run telecommunications services as efficiently as a specialised and competitive service

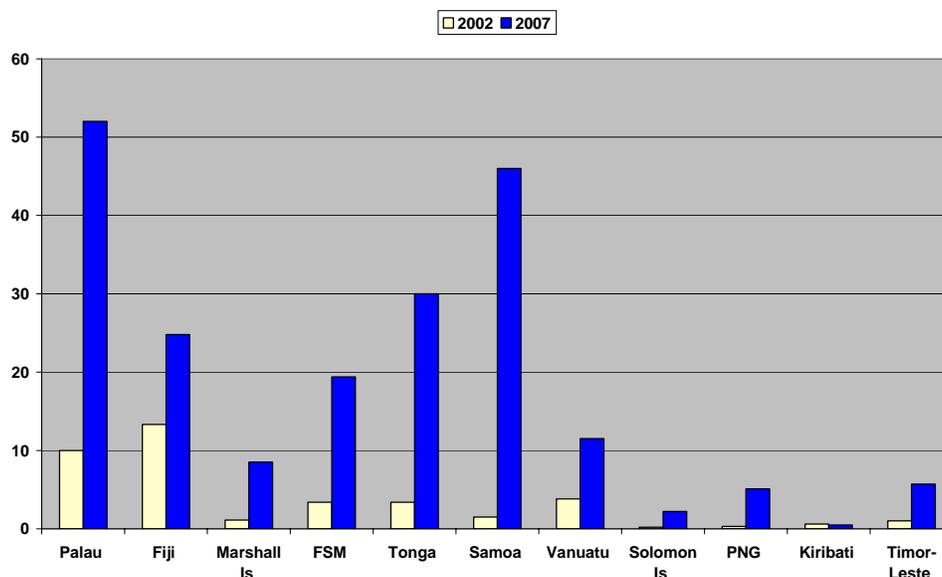
¹ Prepared by Seini O’Connor, Manager, Castalia, with expert input from David Ehrhardt, CEO, Castalia.

provider could. As a result, the full cost of providing telecommunications services—which is generally borne through a combination of taxpayer funding and consumer tariffs—is likely to be higher when the government is a monopoly service provider. Access to services, and the variety of services on offer, is also likely to be lower.

Private sector management models and competition can help to overcome these problems. Market liberalisation can help to improve access to telecommunications services (especially through mobile phone penetration), expand the variety of services available (such as 3G, text messaging, broadband internet, and blackberry services), and reduce the costs of some services.² Eastern Caribbean countries provide an excellent example: once these countries began liberalising their telecommunications markets, competition between operators and the introduction of mobile phones—combined with supportive regulatory changes—significantly increased access and coverage and reduced the price of mobile phone use.

Recognising these benefits, most Pacific Island governments have already corporatised or privatised their telecommunications providers; some are now seeking to further improve efficiency and access by introducing competition into their telecommunications markets. Samoa, Tonga, Papua New Guinea and Palau already experience competition in some market segments, and Vanuatu and Fiji are set to follow (see Appendix A). The success of this move is evident: allowing competition in mobile telephony has greatly improved access in Samoa, Tonga, and Palau (see penetration data in Figure 1). Recently, the threat of competition in Vanuatu and Fiji appeared to have been the main cause of a substantial lowering in mobile telephone SIM card prices and increase in mobile phone use (AusAID, 2008).³

Figure 1: Growth in Mobile Phone Penetration (% of population) in Pacific



Source: AusAID, 2008. Pacific Economic Survey: Connecting the Region

² Lowered price and improved efficiency are important benefits of privatisation and liberalisation, but are not so eye-catching or clear cut as increases in access and service variety, especially as local fixed line rates often go up as a result of rebalancing (as international rates fall).

³ Fiji's comparatively high mobile phone penetration can also be attributed to its higher GDP per capita.

Although opening telecommunications markets to competition has proven benefits, it is not a “quick-and-easy” solution for improving services. Appropriate regulation is needed to ensure the benefits of liberalisation by:

- Setting competition rules that prevent the incumbent operator from unfairly using its advantaged position to effectively drive competitors out—including rules for interconnection and for equal treatment of new entrants
- Regulating remaining natural monopoly elements of telecommunications services
- Ensuring all operators meet minimum safety and service requirements, including adequately responding to consumer complaints and acting to meet consumer needs, and
- If desired, introducing some form of universal access requirements.

Many countries appoint a specialised, independent regulatory organisation, with a sector monitoring and dispute resolution role, to fulfil these regulatory functions.

3 The Pacific context poses some special constraints for regulation

A “traditional” model for an independent telecommunications regulator is an organisation charged with developing, applying and modifying regulatory rules as it deems appropriate for the most efficient and socially desirable long-term functioning of the sector. This type of organisation has, by its nature, a high degree of discretion. To apply this discretion well, it needs highly-qualified personnel who have an excellent understanding of the sector, and who are unlikely to be influenced by political or business considerations.

Although this high-discretion, independent regulator model is widely espoused as international best practice—for example, see the discussion in the ICT Regulation Toolkit—in reality it may not be the best model for every situation. Many Pacific Island countries would face the following obstacles in trying to establish an independent regulator:

- **Few Staff.** It is difficult to find staff in the Pacific that have the training and specialised skills required for a highly-discretionary and independent regulatory role. Where skilled personnel are available, they either must be offered sufficiently high salaries to attract them away from private sector roles, or must be moved away from key public sector positions.
- **High Costs.** In addition to the costs of attracting and retaining staff, regulatory bodies have high overheads. The total cost of the regulator may thus be a very high percentage of total telecommunications revenue in a small Pacific Island country, making regulation financially unviable.
- **Close Connections.** Pacific Island countries tend to have close communities, with a limited group of highly-qualified individuals who have close associations through a range of channels. In such an environment, it is very difficult to ensure an arm’s-length approach to regulatory issues and business deals. Furthermore, telecommunications operators tend to be the predominant (or only) employer of personnel who are well-versed in telecommunications issues—thus, these operators naturally have a strong influence on government thinking. This has certainly been the case in countries such as Vanuatu, where almost everyone with experience in setting telecommunications tariffs worked

at the incumbent telecommunications operator, Telecom Vanuatu Limited (TVL).

Given these special constraints, it may be inappropriate for smaller Pacific Island countries to each appoint their own independent telecommunications regulatory organisation, as larger countries such as Samoa and Papua New Guinea have already done.⁴ However, this does not rule out other regulatory alternatives.

4 Pooling scarce resources can help overcome capacity constraints

A sensible option for overcoming the constraints outlined above is to pool resources across sectors or across countries, or both.

A multi-sector approach provides limited savings

Because many regulatory issues are similar across sectors—for example, across utility sectors such as water, electricity, and telecommunications—a multi-sector approach to regulation can make the best use of a limited number of skilled individuals within a given country. This approach can also spread the costs of regulation across several operators or sector budgets. For these reasons (among others), Papua New Guinea established its Independent Consumer and Competition Commission as an independent multi-sector regulator responsible for performing a range of utility and competition regulation functions, including telecommunications regulation.⁵

However, the costs of a multi-sector organisation in a small country will still be spread across a small population base. If operators are asked to bear the costs of the regulatory organisation, these costs will ultimately be borne by customers—generally the same group of people for each of the essential service utilities. If the Government bears the cost of regulation, this cost will ultimately be borne by tax-payers—also generally the same group of people as utility customers.

A multi-country approach is more complex, but has more scope for efficiency

Although potentially more complicated than a within-country pooling solution, a regional approach can spread the costs of regulation across a wider population base, and draw from a wider group of skilled individuals for staffing.

At one end of the spectrum, a regional approach could simply involve sharing regulatory knowledge between countries. More “intensively”, it could involve countries agreeing to follow similar practices, such as “model” good regulatory practise derived from one or two countries or devised specially for the region. Finally, at the other end of the spectrum, the regional approach could involve sharing regulatory resources—as in a regional regulatory organisation. There are advantages and “keys to success” for each approach, as outlined below.

Sharing knowledge across countries

Pacific Island countries would benefit from meeting regularly to discuss regulatory problems and discuss the success (or otherwise) of various approaches to overcoming these problems. Knowledge and information can also be shared through a regional

⁴ Vanuatu, Fiji and Timor Leste are also considering establishing their own telecommunications regulatory bodies. In Vanuatu, the regulator may be linked to the regulatory organisation for the electricity and water sectors, currently under development, creating a more efficient multi-sector regulator.

⁵ In addition, PANGTEL, a separate technical regulatory organisation, is responsible for regulating spectrum and issuing licences.

resource centre charged with disseminating comparative evaluations of country experiences.

To achieve the greatest benefit, regional knowledge-sharing meetings should ideally be attended by country representatives who are directly involved in regulation—that is, officials from specific regulatory organisations, or from within the Government departments responsible for regulatory functions. Private sector representatives from each country could also be invited to attend, to help provide a clearer picture of regulatory problems and success “on the ground”. In addition, information collected and disseminated at a regional level should be kept up-to-date and be transmitted on a regular basis.

By sharing their own experiences, and learning from others’ experiences, Governments can help each other to improve national-level regulation, with minimal duplication of analytical and investigative resources. Knowledge-sharing can also pave the way to a higher degree of regional integration, such as the harmonisation of regulatory rules throughout the region, or the development of regional regulatory agreements.

Following similar practices across countries

When countries within the region have regulatory problems in common, they may decide to adopt the same or similar legislation to address these problems. This could be done by electing to adopt the legislation already in use in one country, such as in Samoa, Tonga and Papua New Guinea, which have already undertaken significant liberalisation. The adopted legislation could then be applied (without further adaptation) across all countries, or could be used as a model from which countries may choose to apply variations in accordance with local circumstances.

By adopting the same or similar regulatory rules as those used by others in the region, countries can avoid the resource-intensive process of developing their legislation independently. In many countries, the adoption of model regional legislation will lead to improved consumer and local business protection, as existing legislation is either inappropriate or insufficient to cover all the country’s regulatory needs.

More uniform legislation can also provide more certainty and increase the ease of doing business across the region for international businesses, facilitating increased investment in the region.⁶ This can be of particular benefit where an operator is looking to invest across several countries in order to benefit from economies of scale—as in the case of Digicel in the Caribbean. Gaining interest from such large, international operators will likely lead to long-term efficiencies and cost savings in the Pacific region.

Sharing resources across countries

Once regulatory rules are aligned across countries, it may also make sense to share a well-resourced and capable institution that is charged with enforcing these rules.

A regional regulatory organisation can be collectively funded by member countries, allowing the employment of skilled regulatory advisors that offer their services to members on an as-required basis. Although some ongoing regulatory tasks may need to remain with individual countries, the regional organisation could assist with more complex, periodic tasks such as developing new regulatory rules and reviewing existing ones, conducting complex procedures such as tariff resets, or adjudicating on specified regulatory disputes.

⁶ Because of these and other advantages, Australia and New Zealand, for instance, have opted to harmonise many aspects of commercial law.

The knowledge, approach and resource-sharing forms of regional cooperation described above have been used successfully in many small island country settings. The Eastern Caribbean Telecommunications Authority (ECTEL—see Box 1) is a well-known and successful example of a regional regulatory organisation (although the duplication of resources through the national telecommunications regulatory bodies undermines some of the benefits of regional regulation). Governments in the Eastern Caribbean region are now considering a similar regional organisation for the electricity sector.

Box 1: ECTEL—an effective regional telecommunications regulator

ECTEL was established in 2000 by five states in the Eastern Caribbean: Dominican Republic, Grenada, St Kitts and Nevis, St Lucia, and St Vincent and the Grenadines. The presence of the regulator helped in liberalising the telecommunications sector in the region. Each member state has a national telecommunications regulator that retains all decision making power. ECTEL serves these regulators as an advisory body and helps its member states manage their telecommunications sector. While ECTEL’s decisions are not technically binding, they are generally viewed as the last word by several member countries and have direct influence over interconnection policies and licensing conditions.

Source: Ehrhardt & Oliver. (2007). “Big Challenges, Small States”.

Of course, other models of regional resource-sharing are also possible. The Pacific also has some good examples of regional cooperation, such as the Forum Fisheries Agency and the Pacific Aviation Safety Office. The roles, functions and structures of these agencies are summarised in Table 1 below.

Table 1: Examples of Regional Organisations with Regulatory Functions

	Regional Role / Powers	Scope / Functions	Structural Features
Forum Fisheries Agency	<ul style="list-style-type: none"> ▪ Facilitates cooperation ▪ Provides advice ▪ Operates regional databases 	<ul style="list-style-type: none"> ▪ Support on fisheries monitoring, control and surveillance ▪ Training 	<ul style="list-style-type: none"> ▪ Committee ▪ Secretariat with Director and Deputy
Pacific Aviation Safety Office	<ul style="list-style-type: none"> ▪ Facilitates cooperation ▪ Provides advice ▪ Provides common regulatory framework ▪ Monitors compliance with regulations 	<ul style="list-style-type: none"> ▪ Support on Flying operations, Airworthiness, Aviation Security and Airports licensing services 	<ul style="list-style-type: none"> ▪ Council ▪ General Manger ▪ Treaty-based

Regional approaches need good design to succeed

By drawing from both theory and experience, one can identify four key requirements for success in developing new regional organisations:

- **Economies of Scale and Scope:** Regional organisations and interventions work best when there are significant economies of scale, and where regional cooperation in service provision will bring net benefits over national provision. The experience in the Caribbean is evidence of such benefits in the telecommunications sector

- **Member Countries with Similar Needs:** Cooperative approaches work best where all member countries receive tangible benefits, and their needs are relatively similar. This means that sub-regional groupings may work better in some sectors than regional groupings. In the Pacific, the Melanesian islands already have a significant degree of resource sharing and cooperation through the Melanesia Spearhead Group, which could be expanded on to develop sub-regional regulation. The smallest Pacific Island countries, too, have natural alliances with each other, and would benefit from sharing their limited resources to develop sub-regional policies that are effective in small economies that may be unable to support competition or a substantial regulatory organisation
- **Coherent Design**, including:
 - **Clear Objectives and Relationships.** The organisation needs a clear mandate, which should set out the organisation’s objectives, functions and relationships with other regional organisations (particularly to ensure that there is no duplication of capacity or roles across organisations)
 - **Good Governance.** The organisation’s legal and governance structure should also be carefully designed to enable the organisation to properly fulfil its functions, and to ensure transparency and full accountability in its operations. This may include independence from political influence (or at least transparent channelling of such influence, such as through specified areas in which policy decisions can be made)
- **A High Level of Support:** For a regional organisation to be successful, it must be fully supported by its members—both politically and financially. Pressure to maintain this commitment will need to come both from the organisation itself, and from within each country (for example, from the private sector, NGOs, statutory bodies and policy and analytical staff within Ministries, who should all be kept abreast of the organisation’s activities).

Countries are more likely to support organisations whose activities are highly relevant to the achievement of domestic political goals, so the synergy between regional and domestic objectives should be clearly identified.

Finally, international recognition and additional support from donors will also increase the organisation’s effectiveness and international credibility.

The above considerations are important “design features” for an effective regional regulatory organisation. But other design features, too, can help Pacific Island governments make good use of limited regulatory resources.

5 Good regulatory design can limit resource requirements

Beyond thinking about how to share regulatory resources, Pacific Island governments can also consider how to limit the need for a costly, high-discretionary regulatory organisation in the telecommunications and other utility sectors. Experience has shown that developing low-discretion rules, establishing “light” regulatory bodies (or adding a small number of staff to existing bodies), and contracting out specialised services are all effective means of eliminating or reducing the need for a high-capacity regulatory organisation.

In Vanuatu, for example, low-discretion rules for water and electricity provision are set in concession contracts between the provider and the Government. The contracts clearly

establish allowed tariffs, required service standards, and coverage—and thus don't rely on a specialised organisation's discretion to determine what tariffs and service standards should be. The contracts also set out procedures for resolving disputes over any circumstances that are not provided for under the contract. One advantage of setting these rules in a contract is that the utility, customers, and the Government can all be clear about service expectations (the rules are transparent). Another is that the utility can make large investments to meet the service requirements in the knowledge that its allowed revenue cannot suddenly be changed (the rules are predictable, and enforceable through the legal system).

One disadvantage of the contract thus far has been that the Government has not been an equal contracting partner. In other words, the Government has lacked the specialised skills to enforce key contract terms, so the utility has been only very loosely regulated. To address this problem, the Government is now in the process of developing a "light" regulatory organisation in the form of a multi-sector contract monitoring unit to assist it in ensuring the contracts are an effective regulatory tool.

Such "light" regulatory bodies have also been used effectively in other countries. For example, the Tonga Electric Power Board has a limited number of skilled regulatory staff. Rather than employ a full-time team of regulatory professionals, the Board contracts a consulting firm to undertake periodic, specialised tasks—such as developing a fuel adjustment formula (a one-off task), applying the formula (a quarterly task), and undertaking a base-review of the tariff (a 5-yearly task). The overall cost of the consulting firm completing these tasks is much less than the salary of a skilled regulator, and the tasks are undertaken with a high degree of competence and independence.

Similar arrangements are used in the Caribbean. For example, in Trinidad and Tobago, the Regulated Industries Commission is allowed under its Act to assist smaller islands on a fee-for-service basis. In St. Lucia, the Electricity Supply Act sets the regulatory rules such as the formula for calculating allowable tariffs. An independent auditing firm undertakes an annual check to ensure that the rules have been properly applied, and to confirm the allowed tariff based on the formula. A specialised review board, with a three-member expert panel, is formed only when needed for periodic reviews of the regulatory rules.

These are all interesting examples of how small island countries have sought to increase regulatory transparency and predictability whilst limiting the need for significant regulatory resources. However, small countries are not alone in seeking improved regulatory efficiency. For example, Australia has increasingly been moving towards lower discretion rules in many areas of regulation, in part to encourage investors to sink financial resources into much-needed infrastructure investments.

6 Summary

Pacific Island countries need increased investment in their telecommunications sectors to remain connected within and beyond their region. To address these needs, many countries are following the lead of Samoa, Tonga, Palau and Papua New Guinea by moving towards increased private sector participation and liberalisation—Fiji and Vanuatu being the most recent examples. This move means that effective regulatory design will be especially important in the telecommunications sector in Pacific Island countries in coming years.

This note has aimed to summarise international experience in and thinking on effective regulation, especially when resources are limited. Good solutions include pooling resources through multi-sector and multi-country regulation, and designing regulatory

models that limit the need for significant resources. Less resource-intensive options include developing low-discretion rules, establishing light regulatory bodies, and contracting-out specialised regulatory tasks.

Of course, effective regulatory solutions are not pre-packaged, or one-size-fits-all. Thus, Pacific Island governments should draw from international experience and best-practice thinking on regulation to develop a regulatory model that works locally.

Sources and Further Reading

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Appendix A: Monopolies and Competition in Telecommunications Markets

	Retail				Wholesale	
	Telephone: Fixed	Telephone: Mobile	Internet: Dial-up	Internet: Broad-band	Leased lines	International gateway
Federated States of Micronesia	M	M	M	-	M	M
Fiji	C*	C*	C*	C	C*	C*
Kiribati	M	M	M	-	M	M
Marshall Islands	M	M	M	-	M	M
Papua New Guinea	M	C	M	C	M	M
Palau	M	C	M	-	M	M
Samoa	M	C	C	C	C	C
Solomon Islands	M	M	M	M	M	M
Timor-Leste	M	M	M	C	M	M
Tonga	M	C	M	C	C	C
Vanuatu	M	C*	M	C*	C*	C*

M=monopoly, C=competition.

C* =competition permitted in 2007 after renegotiation of exclusive licenses but no new operators yet

Source: AusAID, 2008. Pacific Economic Survey: Connecting the Region.



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