

Ethnic heterogeneity, economic integration and atomistic federalism in the Pacific

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Atomistic federalism describes a federal system of government with a high ratio of constitutional jurisdictions to national population. The system is appropriate when ethnic heterogeneity is high and economic activity is not well integrated between communities. New theoretical research suggests that atomistic federalism in the Pacific will increase the efficiency of public administration, increase state legitimacy through elevation of voter participation rates, and reduce parliamentary hyper-competition. A game-theoretic model of cooperation between communities in a Pacific island country suggests a higher probability of regional state failure in the future unless constitutional structures are reformed to build state legitimacy. Palau offers a successful working model of atomistic federalism in the Pacific region.

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Atomistic federalism is a concept of federal governance where the national constitution vests sovereignty in a large number of small, highly localised jurisdictions. In a previous article, I have used game theory to argue that *kastom* acts as a *de facto* constitution that solves collective action problems and grants legitimacy to chiefs within Melanesian village communities (Powell 2004). If Melanesian states are to enjoy the same level of legitimacy, then the geographic scope of decentralisation defined by Melanesian

constitutions must match the size of independent collectively governed, ethnically homogenous communities that naturally evolved before and without colonial intrusion. A federalist structure that meets this condition naturally forces policies that benefit indigenous interests. Because jurisdictions are clustered in ways consistent with traditionally understood ethnic geography, indigenous institutions become natural agents for political expression of collective preferences. As parliament shares



constitutional power with these jurisdictions, policy must internalise institutional impacts on organs of traditional governance. Atomistic federalism forces the game between the state and indigenous leadership to be cooperative instead of adversarial. As the state implements policies that do not threaten the integrity of indigenous governance, the state earns the position of ally with traditional communities and subsequently shares the political legitimacy already earned by pre-colonial institutions.

Thus far, debate on atomistic federalism focuses on the viability of implementation. A review of the debate reveals little merit or evidence behind arguments against the appropriateness of this constitutional model for the Pacific. New empirical research on fiscal federalism and new economic theories on the relationship between jurisdictional size, efficiency of economic regulation and political participation strengthen the case for atomistic federalism. Application of game theory suggests that cooperation between communities in some Pacific island nations will weaken unless constitutional changes are made to reverse the current shrinkage in state legitimacy. Atomistic federalism may therefore be a timely model for reform. This constitutional design is actively employed in Palau. Palau's constitution efficiently links decentralisation to pre-colonial institutions of indigenous governance. As a result, both state governments and the national government of Palau enjoy a level of legitimacy to which other Pacific island states should aspire.

Is atomistic federalism unfeasible in the Pacific?

Critics of atomistic federalism as a constitutional model usually agree with the concept's theoretical precepts but typically dismiss it with arguments that implementation is too chaotic and sustainability is too

expensive. Three arguments summarise the substance of academic opposition to decentralisation via atomistic federalism. The first argument builds its case on an economic observation—it posits that a large number of small jurisdictions, each with its own government, will enhance the already inefficient largeness of Pacific island states. A history of state-led development in the region has crowded out the private sector, generated deadweight loss, and hampered economic development (Chand 1999). A federalist structure where large numbers of under-populated jurisdictions each have separate executive, legislative, and judicial organs of government exponentially expands the national cost of public administration. By adding another layer of bureaucracy, efficiency in the delivery of public goods and transparency in the disbursement of public funds is further hampered. For example, one scholar argues that the Papua New Guinea constitution 'burdened' the country with a system of nineteen provincial governments where 'the flow of funds between the central government and the provinces remains Byzantine, encouraging corruption at all levels of transportation, education, health and other sectoral administrations' (Hughes 2004:7).

The second argument against the feasibility of atomistic federalism focuses on political dynamics. It conjectures that constitutional sovereignty for localised jurisdictions will strengthen ethnic competition and hamper national unity. In theory, centralised power places a check on inter-community conflict. The national order achieved by the rise of absolute monarchy in Tonga and the institutionalisation of the Great Council of Chiefs by British colonial authorities in Fiji illustrates this concept at work in the Pacific (Lawson 1990; Afeaki 1983). Reversal of centralised governance might incite national breakdown in Melanesian states where electoral politics is



hyper-competitive, social control is not effectively enforced by national institutions, and conflict easily breeds violence (Morgan 2005; Dinnen 1999). Solomon Islands is a case in point. Before intervention by Australia and the Pacific Islands Forum, competing indigenous interests from Malaita and Guadalcanal forced the state to compensate them for costs they incurred from civil strife. These payments only strengthened the ethnic wedge between groups (Kabutaulaka 2002). A federalist system that transfers constitutional power to ethnic groups which violently compete like this might permanently weaken the incentives for cooperation and doom the state's ability to manage conflict.

The third argument opposing an atomistic model questions the feasibility of jurisdictional definitions. Critics assert that constitutional demarcation of ethnically homogenous jurisdictions will not be practicable because of the subjectivity inherent in sociological classification. Patterns of ethnic identity and their linkage to boundaries of geographic control are fluid over time and not amenable to the static and unidimensional requirements of constitutional formalisation (Foale and Macintyre 2000). Customary land rights, for example, can be distinct on the same plot of land—one group may have the right to harvest coconuts while the other group may have the right to cultivate cassava. How is a linear boundary determined in this case? The act of formalisation of itself can thus permanently change relationships and norms within the traditional economy (Larmour 2002). The process of demarcation generates incentives for individuals to claim new and separate ethnic identities and obfuscate interpretation of existing boundaries of customary land control (Lea 2001; Lea 2002). At the extreme, formalised demarcation for political and economic purposes might pollute the same social relationships it seeks to preserve.

There is healthy evidence to counter these arguments against the feasibility of atomistic federalism. Governance by indigenous institutions dominates rural communities in the Pacific whether or not they have a formal constitutional role. Traditional authority implements policy without being on the state payroll. Enforcement of collective social norms by traditional means insures an informal state of order and economic security (De Renzio and Kavanamur 1999; Dinnen 1998). When indigenous governance is formally integrated into the process of state, implementation can be cheap and outcomes can be effective. The aim of jurisdictional government under atomistic federalism is not to implement localised copies of executive, legislative, and judicial institutions as found at the national level. The aim, rather, is to allow preservation of organic institutions for local governance and graft them into the formal patchwork of constitutional power. This keeps costs low. The village courts of Papua New Guinea exemplify efficient use of organic institutions in public administration. Village courts rely on local notions of restorative justice to solve local disputes. This mechanism for conflict resolution demands little, if any, money from the state treasury and is more successful than the expensive and overburdened Westminster legal system applied in Port Moresby to national cases. Fundamentally, the village courts are more effective because they have more legitimacy (Pitts 2001). Success of the village courts in Papua New Guinea shows how state expenses can remain low under atomistic federalism if indigenous institutions form the basis of localised government.

Atomistic federalism can also enhance instead of weaken national unity. Unitary parliamentary states in the Pacific lack legitimacy because of the incentives for corruption that centralisation generates. Because state resources typically come from



foreign aid or single natural resource projects within the country, there is little incentive for members of parliament to form strong links with constituents. The outcome is weak political dialogue and sub-optimal resource transfers between the parliament and areas outside of the capital city. Atomistic federalism endows jurisdictions with a check on parliament through shared control of state resources and administration. In theory, this reverses the incentives for neglect, strengthens the link between constituencies and parliament, and fuels growth in legitimacy for the state. Correlation between the probability of jurisdictional secession and the level of constitutional autonomy is not strongly positive. If it was, the European Union would be a weak and unstable confederation because its members are sovereign countries that can withdraw without condition. The European Union is instead an expanding entity with growing legitimacy. Checks and balances of regional governance under the Maastricht Treaty deflate the threat member governments may feel from supra-national institutions. This low sense of threat combined with obvious benefits of political and economic union motivate members to voluntarily surrender dimensions of national sovereignty to Brussels. Pacific island countries need this self-reinforcing dynamic between ethnic communities and national government to establish necessary levels of state legitimacy. In theory, atomistic federalism can decentralise governance and transfer enough power to ethnic groups to make the payoff from cooperation greater than the payoff from conflict.

Before jurisdictions exercise power though, they require well-defined boundaries, the demarcation of which along ethnic lines is not impossible in the Pacific. Customary land registration, for example, was achieved in Fiji and the Native Land Trust Board has successfully managed leases based on

established boundaries of collective *mataqali* control. New observations from the literature strongly counter stylised pessimism about the viability of formal registration of collective plots in Melanesia where ethnicity is most fractionalised and islands are the largest. Based on registration experiences in Africa, Woodhouse (2003) recommends that customary groups be first allowed to voluntarily register their own interpretation of boundaries. This is already an option for customary groups in Papua New Guinea as enshrined in the 1974 Land Group Incorporation Act (Fitzpatrick 2005). With voluntary registration, customary groups feel less threatened because a process is not imposed. Conflicting land claims reveal themselves through this process and administrators are able to identify and manage 'hot spots' of conflict.

Evidence from experimental economics suggests that landholding groups will respond to incentives to volunteer. The conflict over land can be treated as a prisoner's dilemma game between two neighbouring groups where each has a choice to either 'respect' or 'challenge' existing boundaries. The payoff from 'respect' by both groups is larger than the payoff from 'challenge', but the highest payoff occurs to a group that 'challenges' while its neighbour 'respects'. Because neither group trusts its neighbour under such payoffs, the equilibrium is a continual 'challenge' by both sides. In theory, a landholding group buys insurance if it voluntarily registers its land claim. In exchange for voluntarily imposing permanent geographical limitations on its land claim and accepting the authority of state arbitration in cases of conflicted ownership, a landholding group enjoys some benefit of legal protection for its communal plot. This, in effect, raises the payoff the group enjoys if its neighbour chooses to 'challenge' the land boundary while it chooses to



'respect'. Bohnet and Kübler (2005) modeled a game that reproduces this voluntary land registration dynamic. They ran an experiment where subjects could play a default prisoner's dilemma game or bid to play an alternative prisoner's dilemma game with higher worst-case payoffs. In this context, paying to play the alternative game is the equivalent of voluntarily registering a communal land claim. Not only were subjects willing to pay for the right to play the alternative game, but cooperation was achieved at a higher rate in the alternative game than in the default game. These experimental results inspire confidence that land registration can be achieved without coercion and with less conflict than expected.

Formalisation of local governance within a new federal constitutional structure requires some guarantee of institutional resilience. Critics would argue that corruptive external influences (for example, logging), political rent-seeking, monetisation, and urban migration irreparably handicap traditional governance structures. In a weakened state, village institutions might collapse under the pressure of heightened constitutional responsibility. The argument, though, can be reversed. Traditional governance can be weak if a high degree of state centralisation makes it harder for indigenous institutions to leverage their natural design to solve collective action problems. If traditional solutions become unfeasible under a unitary government structure, then pressures from monetisation and economic integration will logically overrun rural communities. An appropriate federalist structure can efficiently re-strengthen local institutions and free their ability to manipulate traditional norms so that external influences are better regulated and community welfare is better insulated from economic shocks. Just like institutions of the modern state, institutions of traditional governance change and adapt to meet the

shifting needs and expectations of their polities. Indigenous institutions in the Pacific survived external shocks imposed by the Second World War, colonialism, and the abruptness of independence. The newest shock is globalisation, but traditional norms remain resilient in spite of economic integration. For example, Fijians still forgo cash income to preserve land for traditional purposes (Powell 1998), Papua New Guinean villagers intentionally equalise income between their peers through traditional transfers even if the village is urbanised (Gibson et al. 1998), Solomon Islands communities build institutions for collective forest management with no involvement by the state (Makim 2002), and remittances from Samoans, Tongans, and Tuvaluans living overseas do not decay over time as is typical outside of the Pacific (Simati and Gibson 2001; Brown 1997). The literature supports the conclusion that indigenous governance can manage and adapt to external influences as long as state interference is not too burdensome.

Ethnic heterogeneity and social integration

Biases against a federal model with constitutional jurisdictions of tiny size and population are based on confidence in federalist constitutions from countries that are better integrated than Pacific island nations. Integration is measured by the migration of labour and capital across geographical areas and the commonality of social norms, communication and governance across communities. Integration and heterogeneity are separate variables. For example, although the population of the United States is heterogeneous in terms of ethnic background, it is highly mobile in terms of occupation and city of residence and models of government employed by states



and cities are very similar. Compare this to Vanuatu where 109 indigenous languages are spoken among 203,000 residents, only 23 per cent of the population lives in urban areas, and the rank of chief is determined by heredity in some villages (as in traditional Polynesia) and by 'big man' competition in others (as in traditional Melanesia) (Gordon 2005; World Bank 2005, Bolton 1998).

While both integration and heterogeneity can simultaneously be high, high levels of heterogeneity impose high fixed costs on the process of integration within a country. In developed countries like Australia and the United States with high levels of ethnic diversity, these costs are already sunk. Most of the Pacific, though, has yet to incur them. The barriers of integration are highest in Melanesia (that is, Fiji, New Caledonia, Papua New Guinea, Solomon Islands and Vanuatu) where the ratio of people to indigenous languages is only 5,900 to one. Many scholars consider language diversity to be a useful measure of ethnic heterogeneity (Reilly 2004). This same ratio in Sub-Saharan Africa is 380,000 to one (Kimenyi 1998). Rates of urban migration have increased in the Pacific and this has fueled integration. Even within cities, though, the bond between migrants from the same village and recognition of unique social norms remain impressively strong (Macpherson 1999; Kerry 1997). These observations motivate a hypothesis about the Pacific which states that island countries in the region represent a global outlier in terms of heterogeneity. If indeed the success of federalism depends on how well the scale of power devolution matches the scale of socio-political diversity, then Pacific states require a numerous quantity of small constitutional jurisdictions in spite of small national populations.

Belief in the Pacific as a global outlier in terms of heterogeneity requires a logical explanation for why it is true. High levels of ethnic fragmentation are not unique to the

history of the Pacific—all modern societies trace their history to an era of tribal communities each with their own language. Why has integration been slower in the Pacific than in most parts of the world including Africa? Most of the answer lies in geography and colonial history. Island countries are harder to integrate than continental countries because transaction costs are higher. Just as there is higher biological diversity in island groups (relative to land size) because fertilisation between genetic pools is difficult due to natural barriers, there is higher diversity in terms of languages, social norms, and preferences in island nations because fixed costs lower the gains from trade and economic harmonisation.

Tribal experiences in the Pacific differ from tribal experiences in Africa in two important ways. First, the geography of drought and weather generated stronger incentives for migration within Africa. For example, nomadic ethnic groups such as the Masai in Kenya and the Fula in Niger are not a dominant phenomenon in the Pacific (although there are pockets of small nomadic tribes in Papua New Guinea). Land in the Pacific is more productive in agricultural terms. For example, the average value added per agricultural worker in the Pacific ranges from US\$922 in Papua New Guinea to US\$3,281 in Tonga. The average for Sub-Saharan Africa is US\$421 (World Bank 2006). Second, colonial strategies protected the integrity of indigenous institutions in the Pacific but undermined them in Africa. A weakened regime of indigenous institutions stunts the production of public goods within a tribe. These public goods are the benefit of tribal loyalty and investment. When this benefit falls, the incentive to leave traditional society and integrate with modern social networks is higher. Fiji and Kenya offer useful contrasts. In Fiji, British colonial authorities protected customary ownership through establishment of the Native Land Trust



Board, formalised an administrative role for indigenous leaders from across Fiji through creation of the Council of Chiefs, and imported Indian labour to cultivate sugarcane instead of forcing indigenous workers to the field. In Kenya, the British leadership dispossessed nomadic tribes such as the Masai of large tracts of productive customary land, appointed administrators that emphasised political monopoly at the expense of indigenous governance, and stipulated strict minimum work requirements for Africans supplying labour for European settlers (that is, a minimum of 180 days of work to earn a wage and lease land) (Zwanenberg and King 1975). Whereas the British exit from Fiji was peaceful and indigenous institutions exercised measurable power in a new independent government, Kenya's release from colonial control was violent and indigenous governance, already weakened by colonial policies, became lost in the new politics of the Mau Mau Rebellion and African socialism.

Unforced segregation of populations into small communities follows a certain economic logic. Individuals pool themselves in production to generate surplus from division of labour and economies of scale. Some of this surplus is a collective good that is non-exclusive in its generation of benefits (like a public good) (McGuire 1974). The size of a representative community grows until the marginal net benefit of another member reaches zero. This occurs when the incremental cost of enforcement of social control and degradation of collective good benefits equals the incremental gain from enhanced division of labour and production scale. Conflict, intermarriage, and trade introduce innovations over time that lower the marginal costs of the former and raise the marginal benefits of the latter and generate incentives for higher levels of social and economic integration (Rubin 2001). High fixed geographical costs from interaction

between communities, large collective benefits from ethnic loyalty, and weak external threats to indigenous institutions slowed integration in Pacific island countries to a speed lower than that of other developing areas.

A model of cooperation in a Pacific island country

Low levels of integration limit the ability of Pacific island economies to fully mobilise the value of national assets and maximise income. Illegitimacy among Pacific states further handicaps this task and threatens the survivability of nations as functioning units. The cooperation between ethnic groups that currently holds states together may be inherently unstable. This is illustrated by a game-theoretic approach to the issue. At a basic level, interaction between two neighbouring ethnic communities A and B can be modeled as an infinitely repeated prisoner's dilemma game (Rubin 2001). Communities A and B each choose 'conflict' or 'cooperation' in each time period. The choice of 'conflict' implies that one community figuratively raids the other's villages, extracts resources, and enhances wealth through the confiscation of the 'spoils of victory'. The choice of 'cooperation', though, prohibits an economic relationship that generates gains from trade for each community. If the expected present value of gains from trade is higher than the present value of the 'spoils of victory', then cooperation naturally occurs with no coercion. A state of mutual 'cooperation' must sustain itself to establish and enhance the legitimacy of the state.

The stability of cooperation is identified only when the game is dynamically modeled. If both A and B choose 'conflict', then the current period t payoff for each community is x_t . If one chooses 'conflict' but the other



chooses 'cooperation', then the non-cooperative community enjoys 'spoils of victory' equal to a one-period payoff of y_t and the cooperative community earns a one-period payoff of zero. If both choose 'cooperation', then each community enjoys a payoff of z_t in the current period t . The game is represented in normal form in Figure 1.

The relationship between payoffs is $y_t > z_t > x_t > 0$. Intuitively, the 'spoils of victory' are higher than the payoff from cooperation, but the payoff from cooperation is higher than the payoff when both communities are in mutual conflict. Stable cooperation between ethnic groups occurs when institutions motivate groups to rationally forego potential short term gains from 'conflict' (for example, ethnically targeted voter intimidation, ethnic favoritism in political patronage and distribution of state resources, tribal thuggery) in favour of long term gains from 'cooperation' (for example, respect for law and order, market transactions between ethnic groups, professional government bureaucracy).

The appendix outlines the algebra of a dynamic form of the game outlined in Appendix figure 1. The payoff y_t that measures the 'spoils of victory' grows at an annual rate of $\hat{a}$ and the payoff z_t that measures the gains from 'cooperation' grows at an annual rate of $\hat{a}$. Game theory mathematics outlined in the appendix yield an interesting outcome—ethnic groups rationally switch from 'conflict' to 'cooperation' at an early time period, but the

period of 'cooperation' is temporary. This condition occurs when the growth rate in y_t is greater than the growth rate in z_t , or put more formally, when $\hat{a} > \hat{a}$. Intuitively, defection from cooperation allows confiscation of wealth measured by y_t whereas maintenance of cooperation supports an income stream measured by z_t . Therefore, as wealth accumulates, the temptation to defect becomes strong because the relative windfall $y_t - z_t$ from choosing 'conflict' grows dramatically. In this context, the case of $\hat{a} > \hat{a}$ is more realistic than a case of $\hat{a} \leq \hat{a}$.

A trajectory that yields a temporary period of ethnic cooperation figuratively fits the history of many Pacific island nations. Early history is saturated by accounts of tribal and inter-island warfare in Polynesia, Micronesia, and Melanesia. Island societies then entered a more peaceful phase where cooperation between communities formed new institutions of integration. For example, *vanua* naturally merged to form *matanitu* (chiefly states) in Fiji, monarchy united communities in Tonga, colonial unification cooled tribal war in Melanesia, and Christianisation motivated more peaceful means of conflict resolution and enabled trans-ethnic religious identity. Unlike in Africa, integration advanced far enough to sustain democracy after the exit of colonial administrations. Sustainability, though, may not be permanent. Currently, many countries in the region are in danger of re-entering a new era of ethnic conflict and institutional

Figure 1 A game of ethnic cooperation

	B chooses 'conflict' at time t	B chooses 'cooperation' at time t
A chooses 'conflict' at time t	(x_t, x_t)	$(y_t, 0)$
A chooses 'cooperation' at time t	$(0, y_t)$	(z_t, z_t)



failure. Intervention to halt violence between residents of Malaita and Guadalcanal in the Solomon Islands offers the most prominent example. The separatism of Bougainville, wars among Highland tribes, and chronically high crime rates foreshadow possible breakdown in Papua New Guinea. Threatened secession of western provinces on Viti Levu during George Speight's rebellion revealed a new intensity of fissures in Fijian national identity. Sustainability of monarchy in Tonga is questionable as commoners express less patience with royal privilege through national strikes.

In terms of theory, conflict replaces cooperation as the new equilibrium in many Pacific island countries because conditions reinforce the case of $\hat{a} > \hat{a}$. Low economic and employment growth imply a value for $\hat{a}$ that is not sufficiently high. Also, $\hat{a}$ grows at an impressive rate for two reasons. First, the continual inflow of foreign aid makes political competition a zero-sum game to win 'free money' for a parliamentarian's ethnic group or geographical constituency (Hughes 2003; Kimenyi 1998). Second, globalisation enhances the short-term payoffs from resource exploitation. Mismanagement of minerals in Papua New Guinea, timber in the Solomon Islands, and fisheries in Kiribati illustrate the strong temptation of decision makers to bypass Pareto optimal policy choices and 'cash in' on natural assets through allowance of unsustainable harvests (Dauvergne 1998; Nellie 1997; Hunt 1996). In this context, natural resources offer the same type of 'free money' that foreign aid does. The current constitutional order of a unitary state thus strengthens instead of weakens the incentive for politicians to harvest public assets for personal or parochial interest and further de-legitimise the state.

A new constitutional order must engineer payoffs so that $\hat{a} > \hat{a}$ reverses to $\hat{a} < \hat{a}$. Results in the appendix show that when $\hat{a} < \hat{a}$,

the period of cooperation is permanent instead of temporary. Permanent cooperation dissolves any threat to the state's existence. Reduction in $\hat{a}$ is achievable through diffusion of control of public assets and a balance of power in political decision making that makes the employment of public resources more transparent. This can be achieved with atomistic federalism. If the constitution endows jurisdictions with fiscal authority, not all public monies reside in the capital city. The treasury of the central government becomes a smaller target for corruption, and if corruptive events do occur within the parliament or cabinet, jurisdictionally controlled public money is unaffected. Incentives for corruption are also weaker because the sovereignty of jurisdictions subjects parliamentarians to a constitutional check on their decisions and behaviours. The value of $\hat{a}$ can increase through the legal protection of customary land that atomistic federalism offers. Endowed with an explicit recognition of customary boundaries and a formal statement of property right, villages have a stronger incentive to mobilise the commercial value of land through investment and leases. This enhances commercial activity in rural areas and raises the return to trade with other communities in goods, services and labour. These events accelerate national economic integration and increase the growth rate of income.

The model underscores a need to better establish state legitimacy in the Pacific so that cooperation between communities becomes a sustainable fact. Redesign of the constitutional structure can strengthen the incentives of political actors to behave in a way that enhances legitimacy. Atomistic federalism is offered as a model that can theoretically align these incentives in an optimal way given the extreme scale of heterogeneity found in many Pacific island countries. New insights from the economics literature support this statement. Empirical



studies support a theoretical correlation between heterogeneity and the equilibrium intensity of decentralisation. Strumpf and Oberholzer-Gee (2002) find that US states with more heterogeneity among citizens in preferences for alcohol beverage regulation are statistically more likely to devolve the power of liquor control to county governments. Panizza (1999) establishes a statistically significant link between the level of ethno-linguistic fractionalisation and the degree of fiscal decentralisation.

In addition to these empirical studies, theoretical investigation adds further credibility to the case for atomistic federalism. Hochman et al. (1995) argue that identifiable and distinct local market areas should each be governed by a separate jurisdiction whose boundaries match that of the individual market's geography. Economic activity for most Pacific islanders is rooted in management of customary land, localised within a single group of ethnically homogenous villages, and involves transactions that are not part of the cash economy. The boundaries of this activity typically fall under rules managed by local institutions of governance unique to the ethnic group. According to Hochman et al. (1995), these are the logical units of jurisdiction under a federal constitution. For atomistic federalism to effectively contribute to economic development, it must allow Pacific states to gain and exercise political legitimacy. For this to occur, political participation must increase from currently low levels. Vanuatu is an example where only 33 per cent of eligible residents in urban areas casted votes in the 1998 parliamentary elections (Morgan 1998). With high levels of heterogeneity, the value of political goods is greatly localised in Pacific countries. For this case, Borck (2002) argues that jurisdictions have to be very small to generate high voter participation rates. Furthermore, Wärneryd (1998) posits that a large number of small jurisdictions with politically active populations reduce the

competition for state resources within central government because the payoffs to rent seeking are lower. This suggests that the hyper-competition common to Melanesian parliaments is less an issue of culture and more an issue of constitutional insistence on a unitary state. Alesina and Spolaore (1997) theorise that as economic integration occurs, the equilibrium number of jurisdictions grows. Institutional movements toward atomistic federalism would therefore naturally complement the evolution of Pacific island economies as they integrate themselves internally and with international markets.

Atomistic federalism in Palau

Atomistic federalism in the Pacific is not an abstract concept because it is a model already employed by Palau. Palau is a federal system with sixteen states that exercise powers protected by the national constitution. Based on year 2000 data, each state has an average of 1,196 residents and claims an average of 30 square kilometres of land (Iakova and Bhundia 2004). Voter rolls show that nine states had less than 500 eligible voters in 1992 (Shuster 1994). Each state has a constitution that specifies executive and legislative government power. Formal judicial power is vested in the national government. The Constitution of Palau allows states to specify their own structures of government as long as they are democratic, reflect cultural traditions, and do not violate the national constitution (Article XI, Section 1). The constitution also grants state governments ownership of all natural resources (Article I, Section 2) and prohibits the national government from seizing property without consulting the government of the state where the property is located (Article XIII, Section 7). Each state chooses a traditional leader to occupy its seat on the national Council of Chiefs (Article VIII, Section 6) and has the



power to tax and borrow money (Article XI, Sections 3 and 4). Amendments to the constitution require approval of three-fourths of the state governments (Article XIV, Section 2). Unlike the tenth amendment of the US Constitution which transfers all powers not mentioned in the constitution to state governments, the Constitution of Palau grants all unmentioned powers to the national government (Article XI, Section 2).

Palau's institutional and political landscape suggests an effective match between atomistic federalism and national context. Formal state boundaries match pre-colonial demarcation of land by traditional village groups. There is dramatic variation among the architectures of state government. There are ten presidential systems of government, two parliamentary systems, and two that are oligarchies. In six states (including the two oligarchies), chiefs exercise veto power over state government policy. Three state constitutions substitute local courts with councils of chiefs that arbitrate community disputes (Shuster 1994).

These facts underscore two points that are relevant to the Pacific. First, the variation in state government design supports the hypothesis of highly localised value attached to political goods, even in a country with less than 20,000 residents that live on one main island. Anckar and Anckar (2000) observe that there is no demand for national political parties in Palau. Extreme localisation means that state governments absorb most of the political energy in Palau, and because of their constitutional ability to solve collective action problems in a customised way, Palauans see national political parties as redundant and inefficient. Second, the constitution endows the government of Palau with legitimacy because state boundaries are based on indigenous ethnic boundaries, unelected traditional leaders exercise formal power and oversight, and state governments control land and natural

resources. Protection of chiefly powers, at both the state and national level, and state control of natural resources insure the continuation of communal land management as traditionally understood by Palauans. The ability of state governments to exercise constitutional power temporarily blocked Palau's Compact of Free Association with the United States. State governments were hesitant to approve the Compact because of provisions allowing the US military to station materials in Palau that imposed environmental risks (Wood 1993). As predicted by Borck (2002), small jurisdictions have generated a high rate of political participation in Palau, an outcome that is further proof of the legitimacy enjoyed by Palau's atomistic federal system. The voter participation rate in the 1987 vote on approval of the Compact approval was 76 per cent (United States General Accounting Office 1989). For the presidential election of 2000, 81 per cent of the voting age population cast a ballot. Palau ranks 38 out of 172 countries in terms of voter turnout, a ranking higher than celebrated democracies such as Switzerland and the United Kingdom (International Institute for Democracy and Electoral Assistance 2006).

Implementation of state government in Palau generates interesting outcomes. Surprisingly, even though state constitutions specify modern institutions of executive and legislative governance, the costs and size of administration are quite low. For example, in fiscal year 1995, state government revenues were US\$6.7 million (of which US\$5.0 million were transfers from the national government) and expenditures were US\$5.9 million. These figures accounted for 7 per cent and 6.2 per cent of gross domestic product respectively and compare with US\$71.9 million in expenditures by the national government (excluding transfers to the states). Only 25 per cent of state government expenditures were personnel expenses, with the rest going to



development and capital projects (Iakova and Bhundia 2004). This data supports the argument that atomistic federalism can be relatively inexpensive in terms of jurisdictional governance. While state government has not been a financial aggravation, it has enhanced instead of eased the tension between traditional and democratic leadership. Commoners frequently challenge in national court the constitutional legitimacy of chiefly power within state governments. Chiefs are typically not literate in parliamentary procedures, and in states where their power is limited, they are easily outmaneuvered by elected politicians in the passage of legislation. In some ways, this quickens the erosion of customary leadership in Palauan society. In states where chiefs retain measurable power, though, preservation of tradition remains strong (Shuster 1994).

At first glance, Palau seems too much of an outlier to inspire an alternative constitutional model for the rest of the Pacific. Having the highest per capita GDP and rate of urbanisation in the region, Palau provides a striking contrast to its low income, rural dominated Pacific peers in Melanesia (World Bank 2006). Successful economic performance, though, might simply be a product of successful indigenous-based institutional arrangements that other Pacific countries have yet to construct. Admittedly, Palau enjoys large transfer payments from the United States, but even when compared to former Trust Territory peers the Marshall Islands and the Federated States of Micronesia who also receive large amounts of US aid, Palau's performance is impressive. A high level of urbanisation in of itself does not make institutions of indigenous rural governance obsolete or ineffective. Even though a Pacific islander may reside and work full-time in an urban area, strong ties to the home village remain and express themselves through remittances, extended visits, cultivation of land, kinship with other villagers residing

in the same city, and consultation on the collective management of village assets (Macpherson 1999; Kerry 1997). Constitutional legitimisation of the ability of village institutions to solve collective action problems (independent, at times, of where individual members actually live) builds a stronger state that harmonises governance with the way Pacific islanders naturally relate to political and economic decision making. Palau offers this general lesson to the rest of the Pacific even if peculiarities of its federalist constitution have limited application in other countries of the region.

Concluding remarks

Critics argue that atomistic federalism is not viable because another layer of government is cost prohibitive, decentralisation of power weakens instead of strengthens national unity, and demarcation of ethnic boundaries cannot be achieved. There is evidence that strongly counters these arguments. An emphasis on indigenous institutions of governance for local constitutional jurisdictions keeps the expected cost low. A transfer of constitutional power to jurisdictions places a check on parliamentary behaviour and generates an incentive for central government bureaucracy to be more accountable to voters. This raises the benefit of cooperation between communities through the institutions of state and enhances national unity. Based on experiences in Africa, an incremental process that manipulates incentives for voluntary compliance makes registration of customary land (and therefore determination of the boundaries of jurisdictions) a feasible endeavour.

High levels of ethnic fractionalisation and geographic dispersion have slowed economic and social integration within Pacific island countries. Unlike many countries in Africa, indigenous institutions which are a product of this environment remain strong because



colonial authorities did not challenge and counter their authority in destructive ways. These facts make the Pacific unique and should be considered when analysing the appropriateness of a constitutional design for the state. The current model of a unitary parliamentary state has not earned legitimacy in many cases—its high level of centralisation mismatches the highly localised nature of indigenous governance endemic to national character. A dynamic game-theoretic model of cooperation between communities in a Pacific island nation suggests higher future probabilities of state failure unless changes are made to decrease the economic return to corruption and increase the rate of income growth through formalisation of communal title to customary land.

The appropriateness and feasibility of atomistic federalism in the Pacific is validated by academic research and real world example. The literature argues that small jurisdictions with limited constitutional sovereignty optimally match public good production to the geographic scale of village economic activity and increase the rate of political participation. Among countries in the world, there is a positive statistical correlation between the degree of heterogeneity in social preferences and the level of political decentralisation. The constitutional model currently employed by Palau matches the characteristics of atomistic federalism. The structure of jurisdictional governments is highly diverse and indigenous leaders exercise strong influence in issues of local governance. Jurisdictional governments exercise control over customary land but are not a large national expense as a per cent of gross domestic product. The high rate of voter turnout in Palau characterises the high level of legitimacy that the Palauan state enjoys. Together, these facts support atomistic federalism as a viable model for constitutional reform in the Pacific and a logical design for fertilisation of legitimacy in Pacific island states.

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Acknowledgments

This article is based on a paper presented at the conference 'Constitutional Renewal in the Pacific' at the University of the South Pacific, Port Vila, 26–28 August 2005.



Appendix

Assume that y_t and z_t grow at cumulative annual rates of $\hat{a}$ and $\hat{a}$ respectively so that

$$y_{t+1} = (1 + \alpha)y_t, \quad z_{t+1} = (1 + \beta)z_t \quad (1)$$

The payoff x_t does not change so that $x_{t+1} = x_t = x$. When cooperation is an optimal choice for both communities, assume that each community follows a trigger strategy where 'cooperation' is the default choice in period t unless the rival community defected and chose 'conflict' in period $t-1$. If this occurred, 'conflict' is the choice for all periods t and greater.

If a community chooses 'conflict', it earns a current period windfall B_t of $y_t - z_t$ over the choice of 'cooperation'. Because the rival follows a trigger strategy, the community's payoff will be $x_{t+1}, x_{t+2}, \dots$ instead of $z_{t+1}, z_{t+2}, \dots$ for periods $t+1, t+2, \dots$. Given an interest rate of i , the present value C_t of this opportunity cost of lost cooperation is

$$C_t = \frac{z_{t+1} - x}{1+i} + \frac{z_{t+2} - x}{(1+i)^2} + \dots$$

$$= \frac{(1+\beta)z_t - x}{1+i} + \frac{(1+\beta)^2 z_t - x}{(1+i)^2} + \dots$$

(2)
which simplifies to

$$C_t = \frac{1+i}{i-\beta} z_t - \frac{x}{i} \quad (3)$$

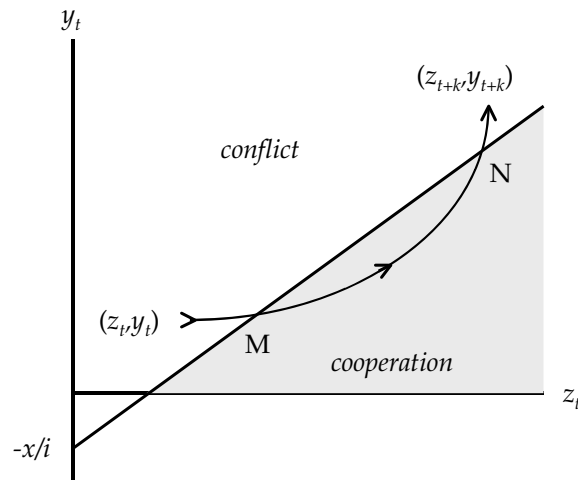
as long as $i > \hat{a}$. Cooperation between both communities does not occur if the net benefit NB_t of choosing 'conflict' is positive

$$NB_t = B_t - C_t = (y_t - z_t) - \left(\frac{1+i}{i-\beta} z_t - \frac{x}{i} \right) > 0 \quad (4)$$

which is true if

$$y_t > \left(1 + \frac{1+i}{i-\beta} \right) z_t - \frac{x}{i} \quad (5)$$

Appendix figure 1 Payoff dynamics and stability of cooperation





Therefore, as illustrated in Appendix figure 1, the threshold at which y_t becomes high enough to induce conflict is a straight line in (z_t, y_t) space with a vertical intercept of $-x/i$ and a slope of $1 + [(1+i)/(i-\hat{a})]$. Combinations of (z_t, y_t) below the threshold line indicate that both communities choose 'cooperate' in period t and combinations above the threshold line indicate a choice of 'conflict' by both communities in period t .

The stability of choice by both communities depends on the trajectory of payoffs over time. The model is used to describe a scenario pertinent to the experience of Pacific island states. Two communities can begin time t in a state of conflict, enter a period of cooperation, and then re-enter a state of conflict. It is possible for Equation 5 to be true at time t but then not true at time $t+1$ as long as y_t is infinitesimally greater than its conflict-cooperation threshold value of $z_t + [(1+i)z_t/(i-\hat{a})] - x/i$ and the slope of the trajectory of (z_t, y_t) is less than the slope of the threshold line (that is, the trajectory is flatter than the threshold line).

$$\frac{y_{t+1} - y_t}{z_{t+1} - z_t} = \frac{\alpha y_t}{\beta z_t} < 1 + \frac{1+i}{i-\beta} \quad (6)$$

This condition is feasible at small values of y_t . Because both y_t and z_t are growing over time, the slope of the trajectory of (y_t, z_t) is always positive. Given that

$$\frac{y_{t+k}}{z_{t+k}} = \left(\frac{1+\alpha}{1+\beta} \right)^k \frac{y_t}{z_t} \quad (7)$$

based on the identities in Equation 1, the trajectory is concave if $\hat{a} < \hat{a}$, a straight line if $\hat{a} = \hat{a}$, and convex if $\hat{a} > \hat{a}$. Assumption of the latter generates the convex trajectory drawn in Appendix figure 1. Convexity suggests a temporary period of cooperation that begins at point M on the trajectory and ends at point N.