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**The Value and Viability of Sovereignty-Conferred Rights in  
MIRAB Economies: The Case of Tuvalu**

by

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# **The Value and Viability of Sovereignty-Conferred Rights in MIRAB Economies: The Case of Tuvalu**

Stephen Boland and Brian Dollery \*\*

## **Abstract**

Derived from the observed dominance of migration (MI), remittances (R), aid (A) and bureaucracy (B) in the national income of Small Island States (SIS) in the Pacific, the MIRAB model has been advanced to explain the economic structure of these countries. In an attempt to add empirical flesh to the ongoing conceptual debate over the long-term sustainability of MIRAB countries, this paper seeks to determine the sources of revenues from sovereignty-conferred rights that include fishing rights, Internet top level domains, philatelic sales, 'phone sex', passport sales and other future possibilities, as well as their magnitude and variability in Tuvalu.

Key Words: MIRAB model; rental revenue; sovereignty-conferred rights; Tuvalu

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## **INTRODUCTION**

The sustainability of Small Island States (SIS) arose in development economics as a result of the post-World War Two decolonisation process. In particular, the lack of formal sector domestic economic activity in these diminutive countries presented a conceptual challenge to the conventional analysis of developing economies. As a consequence, the MIRAB model was put forward as an alternative explanation for these small nations; it attempted to explain the economic development of these islands based on a mix of migration (MI), remittances (R), aid (A) and bureaucracy (B). Reinforcing these characteristics has been the generation of rental incomes from sovereignty-conferred rights.

Tuvalu is a tiny island state in the Pacific Ocean that has been identified as a MIRAB economy. The Tuvaluan economy has survived largely by exploiting the elements of the MIRAB system since nationhood in 1978. However, despite being classified as a MIRAB economy, Tuvalu did not necessarily demonstrate all the characteristics of this kind of economic structure. More accurately, individual MIRAB ingredients have made differing contributions to the economy over time, with the system proving surprisingly viable to date. Indeed, Tuvalu appears to be a 'maturing' MIRAB economy since migration levels have increased leading to the potential for stronger flows of remittances. Moreover, the Government of Tuvalu has managed to diversify its sources of aid using the leverage provided by its diplomatic

relations, strategic value and marine resources. It has also exploited its sovereignty-conferred resources to maximize rental incomes from various sources, such as fishing licence fees and intangible telecommunications assets, including country codes and Internet top-level domains. This paper seeks to provide a quantitative estimate for the SIS nation of Tuvalu of the value of the income streams generated by sovereignty-conferred rights as well as an evaluation of their longer-term viability.

The paper itself is divided into three main parts. Section 2 considers the theoretical evolution of the MIRAB model and the debate surrounding the sustainability of small nations that can be characterized as MIRAB economies. Section 3 seeks to determine the main sources of revenue from sovereignty-conferred rights, their magnitude and variability in the case of the SIS nation of Tuvalu. The paper ends with some brief concluding comments in section 4.

## **THEORETICAL CONSIDERATIONS**

The MIRAB model has added a new dimension to the development literature in an effort to explain a small group of economies that do not seem to conform to conventional growth theories that have been applied across most developing countries. Conventional accounts of the economies of the Pacific SIS have been based on traditional growth models, like the neoclassical Solow growth model. This conceptual framework focuses on capital, labour and technological progress as the

main engines of economic growth. By contrast, the major components of the MIRAB system - migration, remittances, aid and rents - are only considered where they augment capital, labour and technological progress.

The application of conventional analysis to Pacific SIS suggested that there has been little growth or development as indicated by both GDP data and other development indicators in these economies (World Bank 1991). The recommendations that flowed from this analysis maintained that reliance on aid and remittances was not sustainable in the long run and that growth and development could only be achieved through traditional export-led growth.

The development of the MIRAB model by Bertram and Watters (1985) derived from close observation of the characteristics of five Pacific Island economies – Kiribati, Tuvalu, Cook Islands, Niue and Tokelau. Bertram and Watters (1985) suggested that remittances, aid and rents were the basic determinants of economic activity within these economies rather than simply components within a conventional growth model. The MIRAB model thus sought to explain why these economies did not necessarily respond to the policy prescriptions of conventional growth models. In other words, the MIRAB model was presented as an alternative explanation for the behaviour of these SIS economies, depicted as potentially sustainable economic systems, although under rather unique circumstances (Bertram and Watters 1985:512-513).

Rents and rental incomes also represent an integral part of a MIRAB system. Indeed, Bertram and Watters (1985:500) themselves considered aid to be a form of rent. However, other sources of national income generated by these nations, such as remittances and philatelic revenues, are also rents and thus intrinsically part of the MIRAB model. Moreover, this extends to rents generated consequent upon nationhood and the attendant sovereignty-conferred property rights. These rents can be generated through legally assigned property rights over national resources. They can generate royalties from natural resource exploitation, both marine and terrestrial, as well as rents from sovereignty products. These sovereignty products are intangible assets of the nation from which income can be generated, and include 'strategic denial', the ability to issue stamps and coins, and telecommunications assets, such as international telephone country codes and Internet top-level domains. The income from these rents acts analogously to aid and remittances and thereby accentuates the MIRAB characteristics of a given economy.

A crucial aspect of the MIRAB model is that considerable income is generated from outside the borders of the country. The small size of these economies, and their insignificance globally, mean they are especially susceptible to external influences. In relying so heavily on this 'outside' income, SIS nations thus effectively hand much of their economic destiny to global forces.

The income from these external sources does not show up directly in macroeconomic aggregates, such as GDP, but rather from the enhanced economic activity resulting from the inflow of these resources. While the impact of these aggregates will appear in GNP data, in general these statistics have not been calculated for Pacific SIS economies.

Bertram and Watters (1985) originally presented the MIRAB model after observing the operation of the economies of a number of SIS. Bertram (1986) extended this model, with special emphasis on the implications of the model for the labour markets in these economies. The historical foundations of the MIRAB model are such that each of the five subject countries had a colonial heritage with either New Zealand or the United Kingdom that decisively shaped their legal, political and economic environment.

Tuvalu and Kiribati were colonies of the United Kingdom that achieved Independence from the United Kingdom in the late 1970s. By contrast, Niue and the Cook Islands are independent nations in free association with New Zealand, while Tokelau remains a territory of New Zealand. A direct consequence of their shared colonial legacy was that these Pacific SIS countries adopted Westminster systems of government and public institutions in the British mould, with minor variations to suit local circumstances. One economic effect of this colonial history was to raise living

standards above levels that could otherwise be sustained by the earlier local production practices.

After political independence, these relatively high living standards were bolstered by aid from the United Kingdom, New Zealand and other international donors. In the cases of Cook Islands, Niue and Tokelau, the ‘gap’ between living standards and income generation from local production was largely funded by aid from New Zealand and the remittances provided by former residents who had taken up the opportunity of free migration access to New Zealand and its labour market.

The historical dependence of these SIS nations on external colonial powers, combined with local subsistence production, meant that market capitalism played little role in the economy, except where this was ‘introduced as a deliberate act of social engineering by policymakers’ (Bertram 1986:809). Instead, the development of the economy was based largely on the expansion of the public sector and the accompanying growth in government expenditure<sup>1</sup>. This produced high potential for rent-seeking behaviour in the domestic economy by interest groups, especially landowners, civil servants, local governments and religious congregations. In terms of a MIRAB framework, the fundamental policy question facing the newly independent governments was: ‘How can we maximise aid, remittances and rent

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<sup>1</sup> The MIRAB model has also been referred to as the MIRAGE model where the GE refers to ‘government expenditure’. The MIRAGE acronym clearly evokes a lack of sustainability of these economies.



incomes?’ A second question facing the authorities was: ‘How do we distribute these incomes amongst the community?’

The sustainability of the MIRAB model therefore revolves around the durability of aid, maintenance and development of migration avenues, generating remittances and rent incomes to support these economies. A policy question that arises out of the model is: ‘What policies will sustain and expand the elements of the MIRAB system and then equitably distribute the proceeds of these actions?’

The MIRAB model is obviously not only applicable to the five Pacific countries in question, but also to many other small countries in the developing world. For instance, Tonga and Samoa demonstrate significant MIRAB characteristics, in common with the French territories of the Pacific (Poirine 1994), as well as SIS in the Atlantic, like Bermuda and the Bahamas.

Revisiting the MIRAB model in 1999, Bertram examined the performance of the five Pacific MIRAB economies over this period and concluded that the ‘empirical record casts substantial doubt on the conventional wisdom that regards unrequited transfers as an unsustainable basis for material welfare’ (Bertram 1999:111). In this context, unrequited transfers refer to the sources of income that do not arise from sale of commodities, and include remittances, rents and aid.

This immediately raises a related dimension of the MIRAB system that aid is provided in return for the export of ‘geostrategic service(s)’ (Poirine 1995). Poirine

(1995) constructed a model of development with specific reference to the Pacific SIS because they have ‘high strategic value’ relative to their land area, primarily because of the large sea areas under their control. As a result, foreign powers that seek influence or control over their territorial zones will attempt to secure strategic services by means of substantial and ongoing aid. During the initial debate over the MIRAB system in the mid-1980s, the Soviet Union was attempting to extend access for its fishing fleets into the Pacific region. As a consequence, because of Cold War tensions, aid was increased by regional powers, especially Australia and New Zealand, wishing to maintain their strategic influence in the region and thus exclude the Soviet Union from this area.

With the conclusion of the Cold War, it seemed that the US-aligned freely associated states (FAS) in the North Pacific, such as the Marshall Islands and the Federated States of Micronesia, would have much less leverage in negotiations on renewed economic assistance at the end of the first 15 years of their Compacts. However, with the emergence of China and its continuing tensions with Taiwan, together with fear of ‘rogue’ states in the Pacific Rim, particularly North Korea, the US has continued to fund substantial economic assistance packages for a further 20 years. Although this synoptic description represents an oversimplification of a complex negotiation process, it nevertheless captures a significant theme in the process.

By the same token, Australia's increasing presence in the Pacific in recent years, with interventions in the Solomon Islands and East Timor, reflect similar security concerns that Australia has over its immediate region. These Australian interventions have been accompanied by substantial increases in aid to the SIS nations. This further demonstrates how the value of strategic situation, and the aid forthcoming from aid-giving nations, will vary with changes in the global geopolitical situation.

The MIRAB system is often associated with the 'Dutch Disease' or booming sector phenomenon. The term 'Dutch Disease' derives from the experience of the Netherlands in the 1960s with the sudden inflow of large North Sea oil and natural gas revenues into the domestic Dutch economy. The overall effect was that the booming sector (oil and natural gas) raised the value of the Dutch Gilder thereby making many of the non-oil exports of the Netherlands less competitive, with severe effects on the domestic economy.

Corden and Neary (1983) sought to explain the impact of Dutch Disease by dividing an economy experiencing these inflows into three distinct sectors; the booming sector, the export and tradeable sector, and the non-traded sector. When a country experiences the Dutch Disease problem, the booming sector combined with the non-traded sector 'crowds out' the tradeable sector. In the case of a MIRAB economy, the 'aid sector' (for want of a better term) represents the booming sector.

The growth of this sector raises the real value of the exchange rate in the economy making tradeable goods uncompetitive. The resultant growth in the non-tradeable sector leads to a growing public sector (see, for example, Laplagne *et al.* 2001; Treadgold 1999).

The MIRAB model has generated considerable debate in the literature in relation to the appropriateness of the model and whether a MIRAB-type economy is sustainable over the long-term<sup>2</sup>. Among the arguments advanced by critics of the MIRAB model is the proposition that remittance flows are dependent on fickle altruistic motives and are thus unstable over the long term. In much the same vein, rents could decline through time and thus undermine the sustainability of SIS nations.

### **SOURCES, MAGNITUDE AND VARIABILITY OF TUVALU RENTS**

Since Independence, the Government of Tuvalu has sought to exploit its national sovereignty in terms of the rights this has conferred in order to generate revenues for the national budget. Rents have varied in importance since Independence, but have nevertheless been substantial. Accordingly, sensible management of these income streams is crucial to the long-term economic sustainability of Tuvalu.

This paper now attempts to determine in detail the main sources of revenues generated from (i) licensing of fishing vessels from distant water fishing nations

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<sup>2</sup> See Poirine (1998) for an excellent survey of this debate.

(DWFNs); (ii) the leasing and marketing of Tuvalu's top-level domain (TLD) of '.tv'; (iii) revenues from philatelic sales; (iv) the lease of blocks of excess telephone numbers; and (v) passport sales. These revenues accrue to the Tuvalu fiscus and are then expended through the national budget. Because the public sector is so dominant in terms of aggregate economic activity, the use of these revenues plays a pivotal role in determining how the economy operates. It follows that this expenditure could reinforce, or alternatively reduce, the MIRAB characteristics already evident in the Tuvalu economy.

### ***Fisheries***

Tuvalu has few natural resources of any note. Indeed, the only significant natural endowment is the marine resource contained within the nation's 200-mile exclusive economic zone (EEZ). The Forum Fisheries Agency (FFA) estimates that Tuvalu's EEZ covers an area of 737,000 square kilometres. The legislative basis for the establishment of national 200-mile EEZs arises from the 1982 United Nations Convention on the Law of the Sea. The Law of the Sea Convention provides the legal basis for Tuvalu and other Pacific SIS countries to exploit marine resources in the area (Aqorau 2000:37).

Tuvalu ratified the Law of the Sea Convention on 9 December 2002 and this provided the legal basis for generating revenues from the marine resources. This Convention gives a coastal state 'the right to exploit, develop manage and conserve

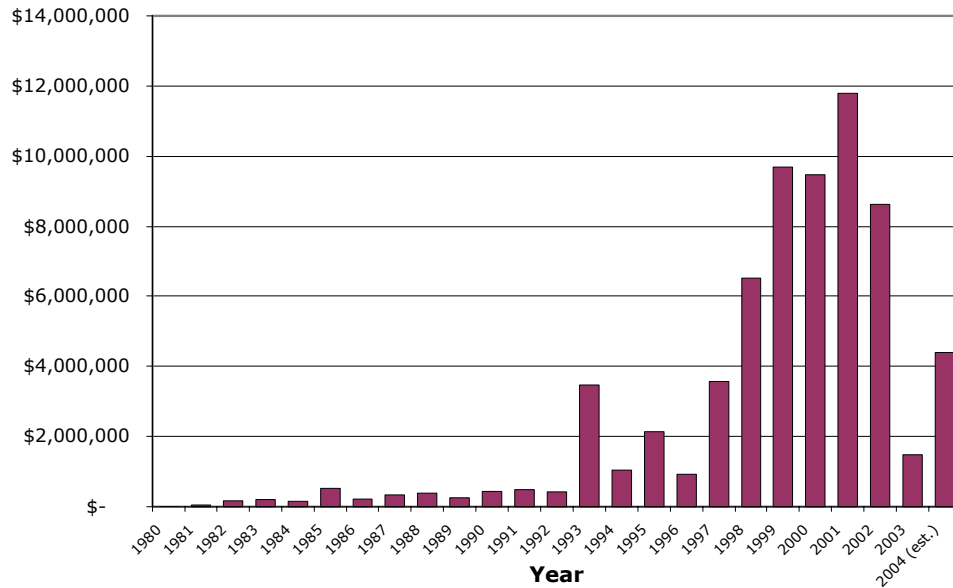
all resources – fish or oil, gas or gravel, nodules or sulphur – to be found in the waters, on the ocean floor and in the subsoil of an area extending 200 miles from its shore’ (United Nations 1998).

While there may be many resources in this area, the only current major endowment for commercial exploitation is the fisheries resource. Tuvalu receives fishing licence fees from a number of sources through licensing vessels of DWFNs. The main source of revenues has been the Multilateral Treaty on Fisheries between the governments of certain Pacific island states (including Tuvalu) and the Government of the US. This treaty allows tuna fishing vessels operated by US companies’ access to the Pacific Ocean Tuna Fishery, including the EEZs of each party to the treaty. Tuvalu also enters into bilateral treaties with Japan, the Republic of China and the Republic of Korea. These treaties are less open to scrutiny than the US Multilateral Treaty and must be considered vis-à-vis the aid programs provided by these nations.

The US Multilateral Treaty provides an annual global payment for the region that is divided largely according to the location of the fish catch. The revenues are allocated to the nation in whose EEZ the catch was made. Given that the tuna stock is a migratory species, moving between EEZs of different nations and international waters, the revenues for any treaty signatory will fluctuate according to where the fish are actually caught.

In general terms, the Government of Tuvalu normally adopts a fee of 5 percent of the value of the fish catch or a minimum of US\$10,000. This rate of 5 percent is based on rates charged by other countries around the region in an effort to coordinate their approach to extracting royalties from DWFNs. In reality, only the US and Japan paid more than \$10,000 in 2001. In essence, revenues fluctuate as fish stocks migrate around the Pacific often following prevailing currents and temperate waters.

Tuvalu as a party to the US Treaty and a number of bilateral treaties has generated substantial revenues for the Government of Tuvalu. The value of these revenues has varied substantially over time, largely due to the migratory nature of tuna fish stocks. Figure 1 provides a graphical representation of the revenues received by the Tuvalu government budget since 1980. It is evident that these revenues were initially insignificant, but grew substantially in the early 1990s as the US Multilateral Fishing Treaty began to yield significant revenues. For instance, when the fishing licence revenues peaked at \$11.8 million in 2001, the US Treaty was responsible for \$9.7 million or 82 percent of these revenues.



**Figure 1: Fishing Licence Revenues**

Sources: Fairbairn (1993); Government of Tuvalu (1991-1994, 1995, 1996-2001, 2002, 2003-2004); and TTFAC (2000-2004).

***Internet Top Level Domain – ‘.tv’***

In the early 1980s, the Internet Assigned Numbers Authority (IANA) allocated each nation a country-code top-level domain (ccTLD) for Internet websites, similar to the international telephone country codes assigned to each nation. During this process Tuvalu was assigned the ccTLD of ‘.tv’ as Australia was assigned the ccTLD ‘.au’. With the rapid expansion of the Internet in the early 1990s and the longer term potential for video streaming over the Internet, the ‘.tv’ ccTLD became a very attractive option for media and other companies looking for readily memorised web addresses.



In the mid-1990s, the Government of Tuvalu received a number of enquiries from various entities to manage and market the ccTLD in recognition of the potential of the '.tv' domain. After receiving these proposals, the government realized that it had an asset of some value. In order to maximize its revenue from this source, the GoT sought technical advice on how best to exploit this resource and entered into a tender process to secure the best deal for the nation.

A Canadian company (known as Information.ca) won the tender in 1998 and began to market '.tv' with the Tuvalu Government holding high expectations of large and sustained revenue flows. In particular, Tuvalu was expecting huge windfalls from this deal with the promise of an initial US\$50 million payment followed by ongoing licensing revenues (*Computing Canada* 1999:4).

The initial arrangement with Information.ca eventually collapsed and the .tv Corporation arose out of its ashes. The .tv Corporation was subsumed into the Idealab! Internet Incubator based in the Silicon Valley in California. In terms of this contract, Tuvalu received a 20 percent share in the new company and mutually agreed minimum revenues of US\$50 million over 12.5 years. This revenue would be provided at the rate of US\$1.0 million per quarter and in this process Tuvalu received an additional once-off payment of US\$12.5 million in 2000.

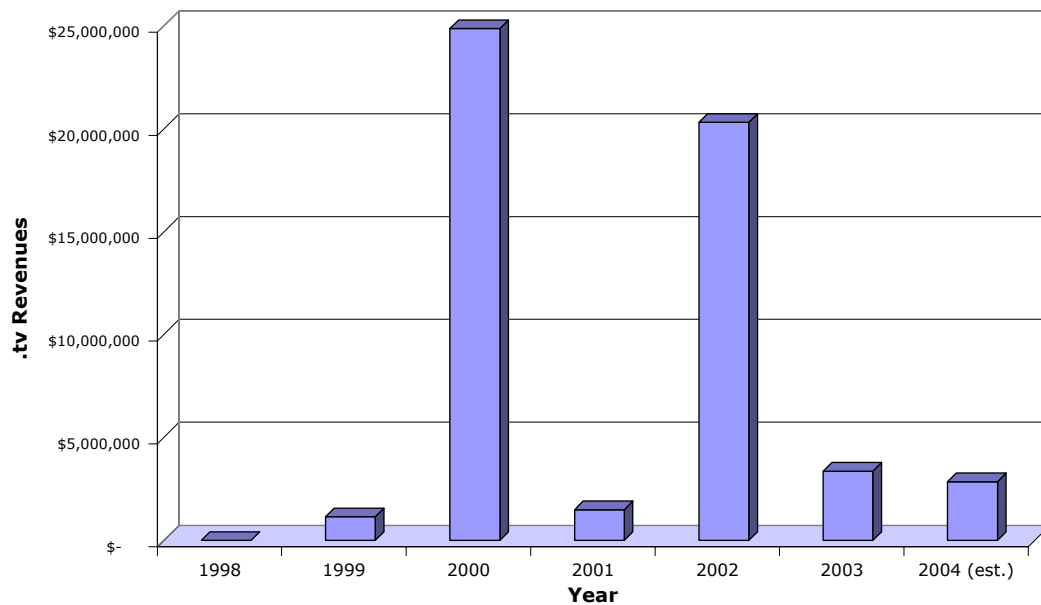
This arrangement was concluded at the height of the dotcom boom and there were plans for an initial public offering (IPO) of .tv Corporation. With the collapse

of the dotcom market in 2000, plans for an IPO were shelved and the ambitious revenue forecasts were severely downgraded. This led to the eventual sale of the .tv Corporation to Verisign Corporation, the company that controls the marketing of the most well known top-level domains such as ‘.com’, ‘.net’ and ‘.org’.

During this process Tuvalu also received an additional US\$10 million in revenue as part of the proceeds from the sale. Under the new arrangement, GoT was guaranteed US\$2.2 million per annum plus 5 percent of all annual revenues from the sale of ‘.tv’ domain names exceeding US\$20 million. Verisign retained the rights to market the ‘.tv’ ccTLD until 2016. However, there is ongoing concern that Verisign will reduce emphasis on the ‘.tv’ ccTLD and decrease revenues in favour of the better-known TLDs, such as ‘.com’ , ‘.org’, ‘.net’, and new TLDs, like ‘.biz’ and ‘.info’. Despite this, a number of high profile websites are now promoting their ‘.tv’ web addresses, such as Major League Baseball (mlb.tv) and the National Football League (nfl.tv).

Revenues arising from the marketing of Tuvalu’s ccTLD have shown vast fluctuations in the short time since this income stream became available to the government (as shown in Figure 2). These fluctuations largely resulted from two windfalls of US\$12.5 million in 2000 and US\$10.0 million in 2002 and not from fluctuations in ‘.tv’ TLD sales. It must be added that the ‘windfalls’ of 2000 and 2002 are unlikely to be repeated in the foreseeable future.

Nonetheless, in terms of the new arrangements entered into with the Verisign Corporation in 2002, revenues from .tv are likely to become more predictable. However, some variability in GoT revenues will result from fluctuations in the \$US/\$A exchange rates and the ability of Verisign to generate ‘.tv’ domain sales in excess of US\$20 million. In this context, it should be noted that the windfalls in 2000 and 2002 were inflated by the weakness of the \$A at the time the payments were made.



**Figure 2: Revenues from Marketing of ‘.tv’ Internet Domain, 1998-2004**

Sources: TTFAC (2000-2004).

It is interesting to note that in nominal terms, the revenues generated from ‘.tv’ ccTLD since 1998 exceed the total automatic distributions from the Tuvalu Trust Fund (TTF) since its inception in 1987. However, this does not hold in present value

terms. Nevertheless, there seems to be potential for ‘.tv’ income to exceed TTF revenues over time and become a more consistent revenue earner for the government than even the TTF.

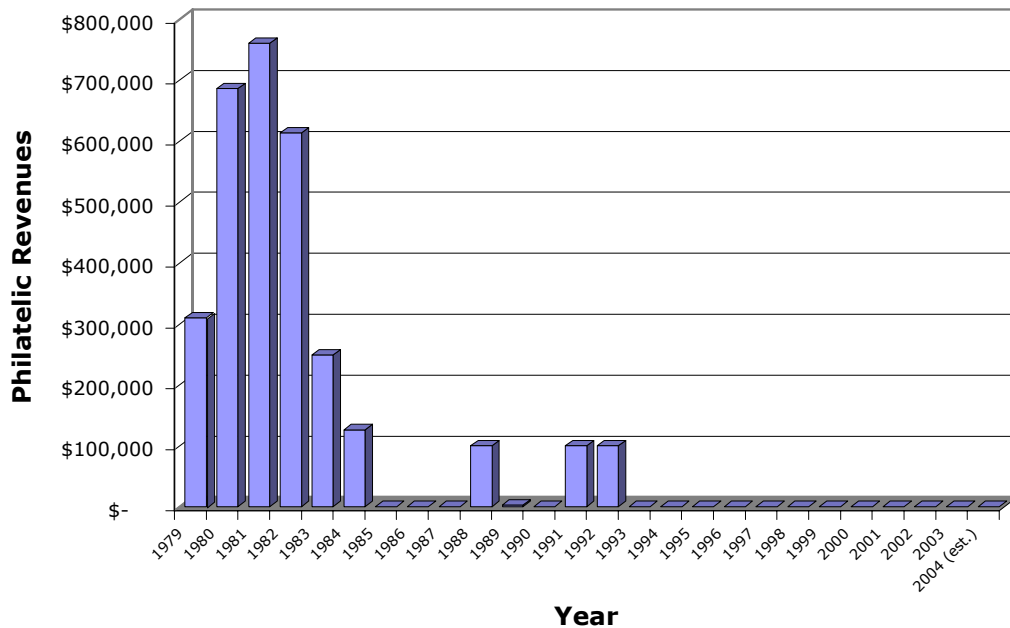
### ***Philatelic Sales***

At Independence in 1978, philatelic sales were expected to be one of the most important revenue sources for Tuvalu. The government’s (then) main revenue source lay in import duties, but philatelic sales were also a crucial component of fiscal policy. During the pre-independence period, Gilbert and Ellice Islands Colony stamps were highly sought after by collectors. With separation of Tuvalu from Kiribati in 1975, and the creation of the new nation of Tuvalu after Independence, stamps issued by Tuvalu became highly desired by collectors.

Recognising the importance of this resource, the government created the Tuvalu Philatelic Bureau (TPB) in 1978 to manage the production and sale of stamps under the Tuvalu name. The high quality and singular attraction of the stamps produced by TPB led to philatelic sales becoming the major foreign exchange earner for the country in the late 1970s and early 1980s.

The profits generated by the TPB resulted in substantial dividends. The importance of the TPB as part of the economy was reinforced by the fact that in the early 1980s it was the third largest employer in the country, after the public service and the Tuvalu Cooperative Society.

The dividends provided to the government by the TPB were substantial as illustrated by Figure 3. Dividends from the TPB were major contributors to the government revenues in the early years after independence. At their peak in 1980-1981, dividends from the TPB represented over 20 percent of the government's recurrent revenues that made this the second largest revenues source after the budget support provided by the United Kingdom. This peak in sales in 1981 was partly a result of the increased sales generated by the royal wedding of Prince Charles and Lady Diana Spencer.



**Figure 3: Tuvalu Philatelic Bureau Dividends paid to Government Revenue 1979-2004**

Sources: Fairbairn (1993); Government of Tuvalu (1991-1994, 1995, 1996-2001, 2002, 2003-2004); TTFAC (2000-2004).

The rapid fall in revenues towards the mid-1980s resulted from a self-inflicted change in fortunes for the government. In essence, as British budget support was phased out, the Tuvalu authorities sought ways of generating revenues in other areas. Hence attention fell on the TPB revenues and how best to increase them.

In an effort to boost philatelic revenues, the Tuvalu government, against the advice of the management of the TPB, released the 'Leaders of the World' series of stamps. These new releases served to increase the number and frequency of stamp issues on subjects such as 'World' trains, cars, soccer players and other diverse subjects. The attempt did not receive market acceptance as collectors around the world terminated subscriptions, leading to a rapid fall in revenues and a loss of a lucrative market position that has never been regained (ADB 2002:93).

The TPB continues to produce high quality stamps and, although it is now operating at a minimal operating profit, it has accumulated substantial losses that are still being repaid. As a result, despite a promising start soon after Independence, dividends from TPB make no contribution to government revenues today. Fortunately, new technology has provided other opportunities to generate similar revenues through the leasing of the marketing of the .tv ccTLD and other telecommunications services.

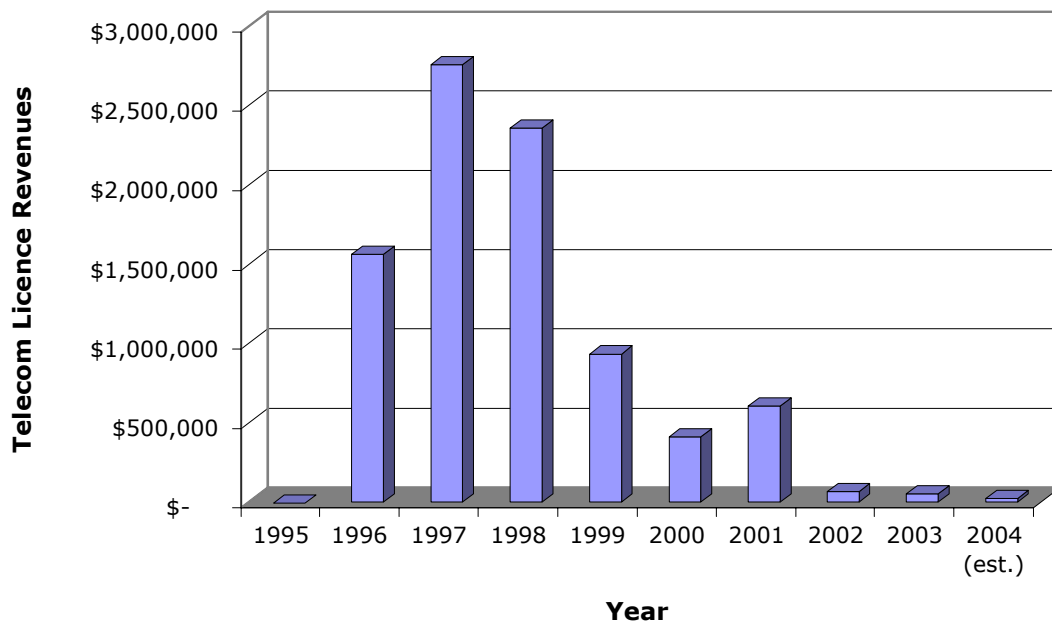
### ***'Phone Sex' Revenues***

Another significant source of revenues in recent years has been the lease of unused blocks of telephone numbers for 'dial-up' services. This enterprise has become notorious the 'phone sex' industry because of the use of many of these telephone numbers for providing telephonic sex services. Indeed, the 'Lonely Planet' website on Tuvalu (<http://www.lonelyplanet.com/destinations/pacific/tuvalu/>) lists 'Phone Sex' as one of Tuvalu's main industries. In fact, telephone calls are diverted to other countries where they are handled.

This enterprise developed after Hong Kong's Asia Pacific Telecom initiated discussions to lease unused telephone numbers using Tuvalu's country code of '688'. The unused blocks of numbers resulted from the existence of Tuvalu's 5-digit telephone numbers used domestically allowing 100,000 potential numbers. Given that the population of Tuvalu is only approximately 10,000, it is likely that the vast majority of these potential telephone numbers would ever be used thus leaving a surplus of numbers available for use by 'dial-up' services.

The arrangement began providing revenues to the government in 1996 and contributed almost 20 percent of government revenues in 1996 and 1997, peaking at \$2.8 million in 1997 as seen in Figure 4. The share of revenue provided to the government fell quickly as other revenues sources grew (i.e. TTF distributions, fish licences and '.tv') and as the taint of the 'phone sex' revenues became less palatable

politically in Tuvalu - a deeply religious nation. A renegotiation of the agreement in 1999 excluded the use of telephone lines for ‘phone sex’ services and the revenues collapsed thereafter. The budget estimates for 2004 budget year prepared by the TTFAC (and based on Treasury figures) indicated that the government expected only \$20,000 from this source in 2004, after no income was received in 2003 (TTFAC 2004:18).



**Figure 4: Telecom Licence Revenues, 1995-2004**

Source: TTFAC (2000-2004).

***Sale of Passports***

A number of countries around the Pacific region have sold passports and citizenship as a way of raising revenues. Tonga and the Marshall Islands have been most notable



among the Pacific islands in exploiting this aspect of their sovereignty. The sale of the passports and citizenship is controversial and subject to serious concerns domestically in most affected countries. Doubts existed in the community regarding the potential of this activity to devalue citizenship, increase pressure on land access, and lead to overcrowding, as well as the effects of selling passports on the general acceptance of passports by other nations as travel documents. Other Pacific Island nations, such as Kiribati and Tuvalu, have also dabbled with this revenue raising possibility.

Tuvalu launched a Business Investment Scheme (as it was then entitled) in 1997 anticipating that the sale of passports would provide huge windfalls for the government and its recurrent budget. Expectations were that the sale of passports would deliver US\$7.3 million annually within two years of the launch of the scheme in 1997. This was largely predicated on expected demand from China and Hong Kong.

Despite these optimistic expectations, the reality was somewhat different. The passport scheme not only failed to generate any significant revenues over its lifespan, but also suffered from considerable opposition within Tuvalu itself. In 1999, Tuvalu's national budget recorded revenues of \$300,000 before falling to \$200,000 in 2000. The scheme has been discontinued and no revenues have been received since 2000.

### ***Other Possibilities***

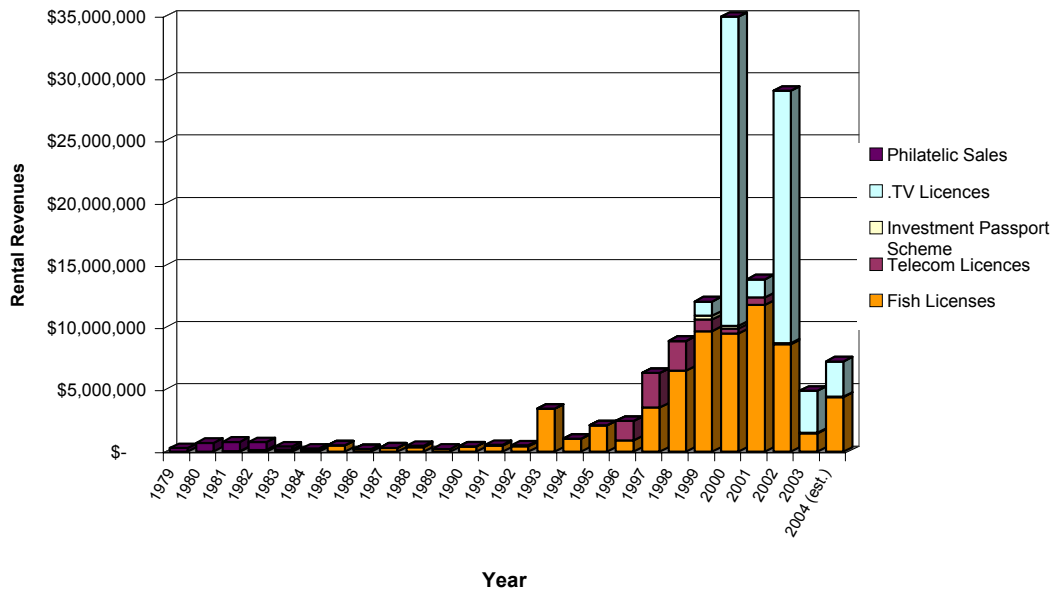
Given the success Tuvalu has had in generating revenues from its sovereignty, it is somewhat surprising that greater efforts have not been directed in this area. Nonetheless, there have been, and continue to be, sporadic efforts to expand these revenue sources. For instance, there has been a program to generate some revenue from coin sales, both for tender and as commemorative items, although the revenues appear to have been minimal since they have not even shown up in official budget estimates. Moreover, there are some ongoing efforts to investigate other areas through the possibility of leasing out satellite space, as Tonga has done, or to secure revenue from the use of Tuvalu's air space by commercial airlines. The air space issue is being investigated as part of an ongoing regional effort through the Pacific Islands Forum.

Opportunities for exploiting revenues can develop at short notice with changes in international law or developments in technology. Accordingly, it is uncertain where future revenue opportunities might arise, if indeed they do arise at all. However, past experience seems to suggest that when sovereignty related opportunities beckon, because of their size small nations can react rapidly and thus possess the ability to generate incomes for their economies that can make important contributions to national income.

## **CONCLUDING REMARKS**

Pulling together all the data from the sources of rental incomes identified in this paper, the combined contribution that these rents make to government revenues becomes apparent. Figure 5 combines all the rent revenues examined in this paper in order to show their total contribution to Tuvalu government revenues since 1979.

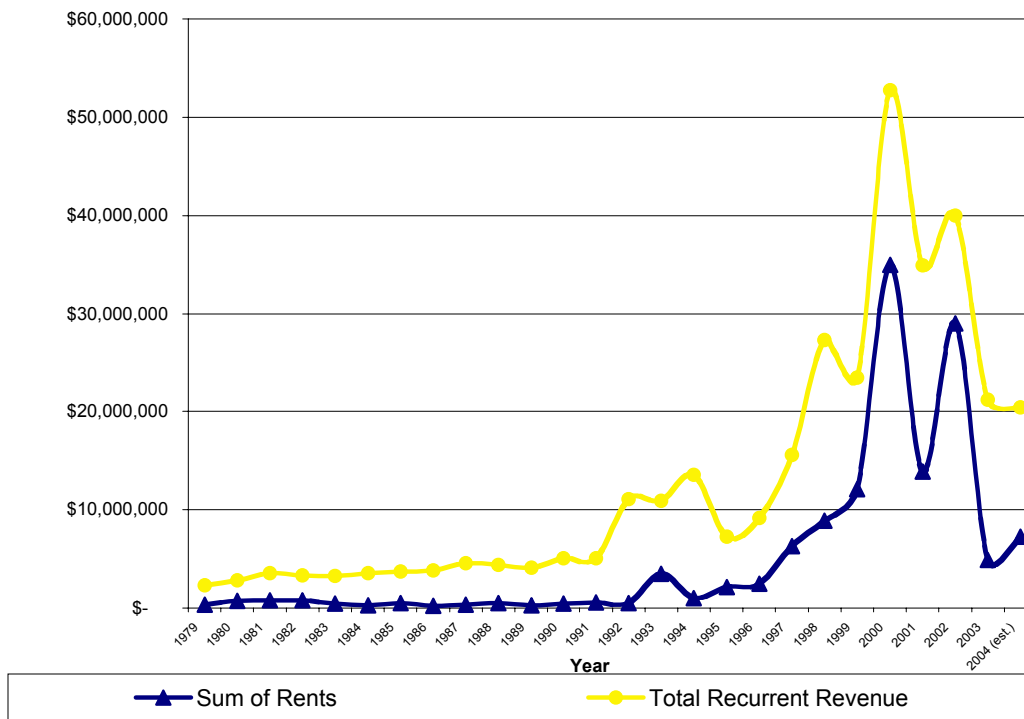
The most notable characteristic of Figure 5 is the growth in these revenues in recent years, boosted by the '.tv' revenues in 2000 and 2002 and the growth in revenues from fishing licences. The variability of these revenues items is one of the major items of concern when considering the sustainability of the MIRAB system in Tuvalu. This variability is compounded by the fact that these fluctuations are beyond the control of the government, which presents substantial challenges to the Tuvalu Government in its management of fiscal policy.



**Figure 5: Rental Revenues 1979-2003**

Sources: Fairbairn (1993:54); Government of Tuvalu (1988); Government of Tuvalu (1991-1994, 1995, 1996-2001, 2002, 2003-2004); TTFAC (2000-2004).

The contributions of these revenue items to total government revenue, shown in Figure 6, highlight the importance of these revenues to the Government of Tuvalu's overall revenue. The heavy reliance of Tuvalu public finances has become more obvious with the fall in rent revenues in 2003 and 2004 and these effects on overall government revenue. This reinforces the fact that the government has become increasingly dependent on these revenues with their corresponding impact on the bureaucracy, domestic wage levels and the effective exchange rate.

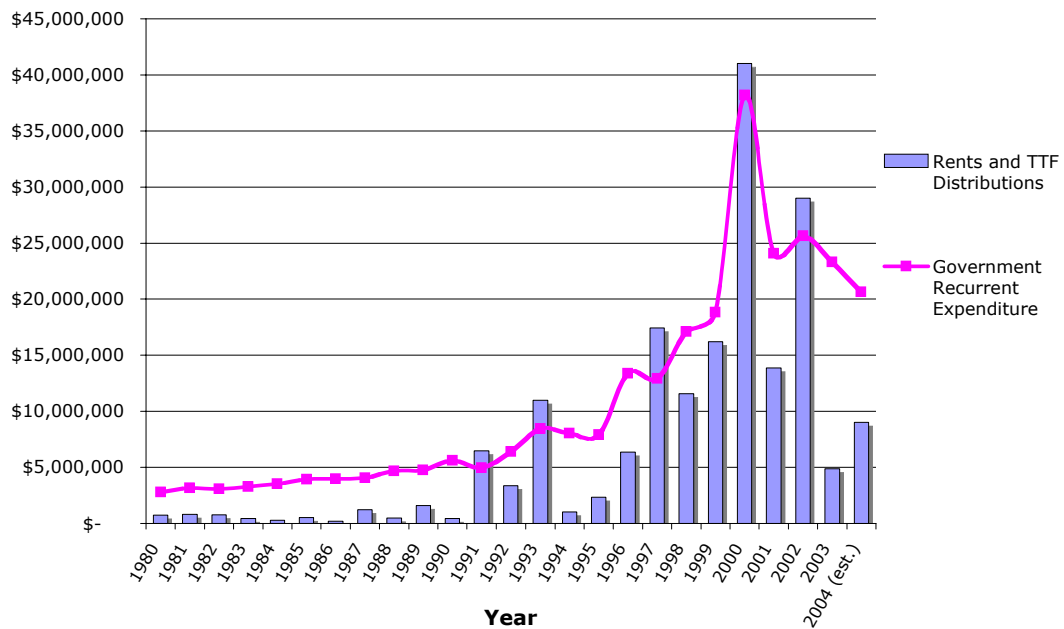


**Figure 6: Rent Revenue and Total Revenue**

Sources: Fairbairn (1993:54); Government of Tuvalu (1988), (1991-1994, 1995, 1996-2001, 2002, 2003-2004); TTFAC (2000-2004).

What are the ramifications of these rental incomes from the perspective of the long-run sustainability prospects of Tuvalu as a ‘maturing’ MIRAB economy? The monetary inflows created by sovereignty-conferred rental incomes, augmented by TTF revenues, have allowed the authorities to fund some capital development previously underwritten by foreign aid. Although this suggests that Tuvalu is becoming less dependent on aid, donor programs are nonetheless still critical to funding investments in education, training and health, as well as infrastructure development.

Growth in the TTF and rental incomes, especially from fishing licences and ‘.tv’ revenues, has corresponded with substantial growth in the public sector since 1997 under the influence of these windfalls, as illustrated in Figure 7. This has been compounded by the fact that these revenues accrue directly to the central Treasury allowing government to redirect these revenues to areas largely determined by political considerations. Indeed, GDP data shows that the proportion of public administration to GDP, after falling below 20 percent for the first time in 1997, has risen to levels above 25 percent in subsequent years (Central Statistics Division and Lewington 2004).



**Figure 7: Government Recurrent Expenditure versus Rents and TTF Income – 1980-2004**

Sources: ADB (1998:9); ADB (2002:200); Fairbairn (1993:54); Government of Tuvalu (1988:26, 28); TTFAC (2000-2004).

Coinciding with this, government recurrent expenditure has been consistently above 60 percent of GDP during these years (ADB 2004; Central Statistics Division and Lewington 2004). Moreover, a large spike in government expenditure in recent years, to a peak of 159 percent of GDP in 2000, coincides with the stellar performance of rental incomes, most notably ‘.tv’ revenues, during this period (Boland 2005). These increases in revenues corresponded with similar spikes in government recurrent expenditure shown in Figure 7.

## REFERENCES

ADB, 1998. *Tuvalu: 1997 Economic Report*, Asian Development Bank, Manila.

ADB, 2002. *Tuvalu: 2002 Economic and Public Sector Review*, Asian Development Bank, Manila.

ADB, 2004. *Key Indicators 2004: Poverty in Asia: Measurement, Estimates, and Prospects*, Asian Development Bank, Manila, <[http://www.adb.org/Documents/Books/Key\\_Indicators/2004/default.asp#contents](http://www.adb.org/Documents/Books/Key_Indicators/2004/default.asp#contents)>

Aqorau, T., 2000. ‘Illegal fishing and fisheries law enforcement in the small developing states: The Pacific islands experience’, *The International Journal of Marine and Coastal Law*, 15(1):37-63.

- Bertram, G., 1986. 'Sustainable development in South Pacific micro-economies', *World Development*, 14:809-822.
- Bertram, G., 1999. 'The MIRAB model twelve years on', *The Contemporary Pacific*, 11(1):105-138.
- Bertram, G. and Watters, R.F., 1985. 'The MIRAB economy in South Pacific microstates', *Pacific Viewpoint*, 26(3):497-519.
- Boland, S.J., 2005. 'Tuvalu: Piecing together a MIRAB economy', Master's Thesis, University of New England.
- Central Statistics Division and Lewington R., 2004. *Tuvalu National Accounts, Report on the Revision in November 2003*, Ministry of Finance and Economic Planning, Funafuti, Tuvalu and Department of Statistics, Wellington, New Zealand.
- Computing Canada*, 1999. May 28: page 4.
- Corden, W.M. and Neary, J.P., 1984. 'Booming sector and de-industrialisation in a small open economy', *The Economic Journal*, 92:825-848.
- Fairbairn, T.I., 1993. *Tuvalu: Economic Situation and Development Prospects*, International Development Issues No. 29, Australian International Development Assistance Bureau, Canberra.
- Government of Tuvalu, 1988. *National Development Plan IV, 1988-1991*, Government of Tuvalu, Funafuti.



Government of Tuvalu, 1991. *Tuvalu National Budget 1991*, Ministry of Finance, Commerce and Public Corporations, Funafuti.

Government of Tuvalu, 1992. *Tuvalu National Budget 1992*, Ministry of Finance, Commerce and Public Corporations, Funafuti.

Government of Tuvalu, 1993. *Tuvalu National Budget 1993*, Ministry of Finance, Economic Planning, Commerce and Public Corporations, Funafuti.

Government of Tuvalu, 1994. *Tuvalu National Budget 1994*, Ministry of Finance, Economic Planning, Commerce and Industry, Funafuti.

Government of Tuvalu, 1995. *Tuvalu National Budget 1995*, Ministry of Finance, Economic Planning, Commerce and Industry, Funafuti.

Government of Tuvalu, 1996. *Tuvalu National Budget 1996*, Ministry of Finance, Economic Planning, Commerce and Industries, Funafuti.

Government of Tuvalu, 1997. *Tuvalu National Budget 1997*, Ministry of Finance and Economic Planning, Funafuti.

Government of Tuvalu, 1998. *Tuvalu National Budget 1998*, Ministry of Finance and Economic Planning, Funafuti.

Government of Tuvalu, 1999. *Tuvalu National Budget 1999*, Ministry of Finance, Economic Planning, Funafuti.

Government of Tuvalu, 2000. *Tuvalu National Budget 2000*, Ministry of Finance and Economic Planning, Funafuti.

- Government of Tuvalu, 2001. *Tuvalu National Budget 2001*, Ministry of Finance and Economic Planning, Funafuti.
- Government of Tuvalu, 2002. *Tuvalu National Budget 2002*, Ministry of Finance and Economic Planning, Funafuti.
- Government of Tuvalu, 2003. *Tuvalu National Budget 2003*, Ministry of Finance and Economic Planning, Funafuti.
- Government of Tuvalu, 2004. *Tuvalu National Budget 2004*, Ministry of Finance and Economic Planning, Funafuti.
- Laplagne, P., Treadgold, M., and Baldry, J., 2001. 'A model of aid impact in some South Pacific microstates', *World Development*, 29(2):365-383.
- Poirine, B., 1994. 'Rent, emigration and unemployment in small Islands: The MIRAB model and the French Overseas Departments and Territories', *World Development*, 22(12):197-200.
- Poirine, B., 1995. 'A theory of aid as trade, with special reference to small islands', *In Two Essays on Aid and Remittances*, Pacific Studies Monograph 19, Sydney: Centre for South Pacific Studies, University of New South Wales.
- Poirine, B., 1998. 'Should we love or hate MIRAB?', *The Contemporary Pacific*, 10(1):65-106.
- Treadgold, M.L., 1999. 'Breaking out of the MIRAB mould: historical evidence from Norfolk Island', *Asia Pacific Viewpoint*, 40(3):235-249.

- TTFAC, 2000. *14<sup>th</sup> Annual Report of the Tuvalu Trust Fund Advisory Committee*, Tuvalu Trust Fund Advisory Committee, Funafuti.
- TTFAC, 2001. *15<sup>th</sup> Annual Report of the Tuvalu Trust Fund Advisory Committee*, Tuvalu Trust Fund Advisory Committee, Funafuti.
- TTFAC, 2002. *16<sup>th</sup> Annual Report of the Tuvalu Trust Fund Advisory Committee*, Tuvalu Trust Fund Advisory Committee, Funafuti.
- TTFAC, 2003. *17<sup>th</sup> Annual Report of the Tuvalu Trust Fund Advisory Committee*, Tuvalu Trust Fund Advisory Committee, Funafuti.
- TTFAC, 2004. *2004 First Half-Yearly Report of the Tuvalu Trust Fund Advisory Committee*, Tuvalu Trust Fund Advisory Committee, Funafuti.
- United Nations, 1998. *The United Nations Convention on the Law of the Sea (A Historical Perspective)*, <[http://www.un.org/Depts/los/convention\\_agreements/convention\\_historical\\_perspective.htm](http://www.un.org/Depts/los/convention_agreements/convention_historical_perspective.htm)>.
- World Bank, 1991. *Pacific Island Economies: Towards Higher Growth in the 1990s*, Washington, D.C.