

**Pacific Studies Series**

# **Toward a New Pacific Regionalism**

An Asian Development Bank—Commonwealth Secretariat  
Joint Report to the Pacific Islands Forum Secretariat

**VOLUME 3: WORKING PAPERS**

Working Paper No. 6

## **Quantitative Assessment of the Cost of Governance Failure in Fiji Islands, Nauru, Papua New Guinea, and Solomon Islands**

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# Preface

This report was prepared for the Pacific Islands Forum Secretariat (PFIS) in Suva, Fiji Islands. The report is one output of an Asian Development Bank (ADB) technical assistance project (TA 6226 REG): “Developing and Implementing the Pacific Plan for Strengthening Regional Cooperation and Integration.” The Commonwealth Secretariat provided funding to the project.

The lead author of the report was Dr. Roman Grynberg, Deputy Director of Trade and Regional Cooperation at the Commonwealth Secretariat. He was assisted by Michael Hyndman, a cost-benefit analyst contracted by ADB, and Sacha Silva, an economist contracted by the Commonwealth Secretariat. Consultants from PIFS and the Pacific region provided valuable inputs for the report. Bill Costello was the ADB task manager.

The report is published in three volumes. Volume 1 is the Executive Summary. Volume 2 is the main report. Volume 3 contains the working papers commissioned for the report—a series of independent studies assessing potential benefits and costs of implementing a variety of possible regional initiatives. Volume 3 has been printed in hard copy in only limited numbers. However, it is available on the websites of ADB ([www.adb.org](http://www.adb.org)) and at [www.pacificplan.org](http://www.pacificplan.org).

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## I. INTRODUCTION

As shown below, economic growth in Fiji Islands and Papua New Guinea (measured in terms of GDP) has barely kept pace with population growth since these countries became independent. There was a positive trend in per capita GDP in Solomon Islands up until the outbreak of civil unrest in the late 1990s, which resulted in a significant decline in per capita GDP. There are no time series data available on GDP in Nauru; however, the loss of the country's substantial trust funds is well known, as is its decline into its present almost insolvent position. The poor economic performances of these countries can be attributed to poor governance, used in the broad sense to include poor economic management at all levels of government.

How much has poor governance cost the citizens of these countries? How much better off would they have been if there had been good governance over this period? How much will they lose if their governance does not improve in the future? It is impossible to answer these questions with any significant degree of certainty. All that it is possible to do is to pose some counterfactuals in the form of comparisons with the economic performance of somewhat similar countries that have been well managed, or comparisons with the average of developing countries that do not appear to have suffered from poor governance.

Below, use is made of these counterfactuals to estimate the costs of poor governance in Fiji Islands, Papua New Guinea and Solomon Islands over the period since independence and to estimate the future cost to the citizens of these countries if governance is not improved. As there are no historical GDP data available for Nauru, an estimate of the cost of poor governance in that country is made by means of a counterfactual of good management of its trust funds.

## II. ESTABLISHING COUNTERFACTUALS

Poor governance is essentially the outcome of the inappropriateness and/or the ineffectiveness of a country's basic institutions, including the lack of enforcement of the "rules" set by these institutions (such as constitutions, election systems, law and justice systems, and public administration systems). Lisa Chauvet and Paul Collier (2004) have estimated the impact of poor governance in developing countries through estimating the loss of economic growth associated with poor policies, institutions and governance. They estimated that, on average, developing countries suffering poor governance, that are not also suffering from civil unrest, record 2.3 percentage points less GDP growth per year relative to other developing countries. (A country also suffering civil unrest is estimated to lose an additional 3.8 percentage points GDP growth per year for each year of the civil unrest.)

The validity of applying this estimate of the costs of poor governance to the Pacific countries can be supported in part by a comparison of the economic performances of Fiji Islands and Papua New Guinea on the one hand and Mauritius and Botswana on the other. Fiji Islands and Mauritius are similar in many respects. Both are small island states with a similar mix of ethnicities and a similar history of colonial administration. At one point both countries were very heavily dependent upon sugar production and exports. With the implementation of sensible policies, the economy of Mauritius has undergone a fairly rapid structural transformation from a primarily agricultural economy to an economy in which manufacturing and services are predominant. Fiji Islands has attempted economic reforms, without much success, and except for the development of tourism and the limited growth of garment manufacturing under preferential market access, the economy remains largely rural. It may reasonably be argued that the coups in Fiji Islands in 1987 and 2000 may not have occurred if there had been stronger

economic growth, as underlying the coups has been resentment by indigenous Fijians of the economic success of Indo-Fijians.

The GDP growth performance of Fiji Islands and Mauritius is very different (see Table 1). Over the 1980 to 2003 period, per capita GDP growth in Fiji Islands (in 1995 US dollar terms) averaged 0.89 per cent. Over this same period, the average per capita GDP growth in Mauritius was 4.3 per cent. It may be argued that because Mauritius has had a larger quota for its sugar exports to the European Union than has Fiji Islands that it has benefited more from this aid. However, the receipt of such aid does not necessarily mean that the aid is well used. In Fiji Island's case, the aid that it has received in the form of prices for its sugar exports two to three times higher than world prices has been dissipated through pricing schemes that have encouraged the expansion of the sugar industry into marginal areas. As well, the high prices have allowed highly inefficient sugar mills to continue operations.

**Table 1: Comparison of GDP/Capita and GDP/Capita Growth Rates in Fiji Islands and Mauritius, 1980-2003**

	<b>Fiji Islands: GDP/capita</b>	<b>Fiji Islands: GDP/capita</b>	<b>Mauritius: GDP/capita</b>	<b>Mauritius: GDP/capita</b>
	(constant 1995 US\$)	(constant 1995 growth rate, %)	(constant 1995 US\$)	(constant 1995 growth rate, %)
1980	2,372.3	-3.6	1,745.7	—
1981	2,475.6	4.4	1,802.9	3.3
1982	2,285.1	-7.7	1,882.4	4.4
1983	2,141.4	-6.3	1,918.4	1.9
1984	2,276.0	6.3	1,951.6	1.7
1985	2,150.3	-5.5	2,051.0	5.1
1986	2,261.6	5.2	2,202.7	7.4
1987	2,091.6	-7.5	2,389.3	8.5
1988	2,117.4	1.2	2,556.9	7.0
1989	2,244.5	6.0	2,680.2	4.8
1990	2,311.7	3.0	2,814.8	5.0
1991	2,209.4	-4.4	2,949.7	4.8
1992	2,352.0	6.5	3,067.8	4.0
1993	2,426.7	3.2	3,201.9	4.4
1994	2,537.3	4.6	3,298.3	3.0
1995	2,585.2	1.9	3,404.7	3.2
1996	2,645.9	2.3	3,543.4	4.1
1997	2,490.6	-5.9	3,705.1	4.6
1998	2,501.9	0.5	3,886.8	4.9
1999	2,706.6	8.2	4,044.0	4.0
2000	2,585.6	-4.5	4,159.7	2.9
2001	2,647.9	2.4	4,390.3	5.5
2002	2,735.9	3.3	4,538.1	3.4
2003	2,831.1	3.5	4,633.7	2.1
Average	—	0.9	—	4.3

Source: World Bank Indicators online.

Botswana is an appropriate comparator for Papua New Guinea. Like Papua New Guinea, Botswana is rich in terms of natural resources—in particular, diamonds, which account for around 40 per cent of the country's output. Botswana was a British colony that at independence in 1968 had only 12 kilometers of paved road, 22 university graduates, and 100 secondary

school graduates (Acemoglu *et al* 2001). Similar to Papua New Guinea, land in Botswana is collectively owned. As can be seen from Table 2 below, prior to independence Botswana had a much lower per capita GDP than Papua New Guinea. However, since independence, Botswana has experienced much faster economic growth than Papua New Guinea. Over the period 1970-2003, PNG's per capita GDP growth rate (in constant 2000 US\$) averaged only 0.2 per cent, while Botswana's averaged 6.7 per cent. It is claimed that Botswana's record as the fastest growing country in the world over the past 40 years is due to its good economic policies, which are based in its good institutions (Acemoglu *et al* 2001).

**Table 2: Comparison of GDP/Capita and GDP/Per Capita Growth Rates in Botswana and Papua New Guinea, 1970-2003**

	<b>PNG: GDP/capita</b> (constant 2000 US\$)	<b>PNG: GDP/capita growth rates</b> (constant 2000 US\$)	<b>Botswana: GDP/capita</b> (constant 2000 US\$)	<b>Botswana: GDP/capita growth rates</b> (constant 2000 US\$)
1970	634.7	8.2	436.2	13.3
1971	658.6	3.8	530.4	21.6
1972	679.2	3.1	647.3	22.0
1973	706.4	4.0	758.0	17.1
1974	707.8	0.2	795.9	5.0
1975	685.3	-3.2	836.3	5.1
1976	646.5	-5.7	893.4	6.8
1977	636.3	-1.6	966.0	8.1
1978	674.0	5.9	1,065.0	10.4
1979	669.4	-0.7	1,153.7	8.2
1980	637.6	-4.7	1,246.8	8.1
1981	619.8	-2.8	1,312.2	5.2
1982	606.1	-2.2	1,420.2	8.2
1983	609.6	0.6	1,550.8	9.2
1984	591.7	-2.9	1,625.2	4.8
1985	599.3	1.3	1,681.9	3.5
1986	611.3	2.0	1,758.5	4.6
1987	612.5	0.2	1,902.4	8.2
1988	614.9	0.4	2,198.4	15.6
1989	591.6	-3.8	2,405.5	9.4
1990	560.3	-5.3	2,486.6	3.4
1991	599.0	6.9	2,587.6	4.1
1992	665.2	11.1	2,579.5	-0.3
1993	766.6	15.2	2,546.9	-1.3
1994	791.3	3.2	2,557.6	0.4
1995	745.0	-5.8	2,588.1	1.2
1996	781.9	5.0	2,655.9	2.6
1997	732.3	-6.3	2,766.7	4.2
1998	687.0	-6.2	2,867.4	3.6
1999	720.7	4.9	2,962.3	3.3
2000	694.6	-3.6	3,135.0	5.8
2001	662.6	-4.6	3,260.4	4.0
2002	642.1	-3.1	3,371.6	3.4
2003	644.6	0.4	3,532.0	4.8
Average	—	0.2	—	6.7

Source: World Bank Indicators online.

Another comparison that lends some support to the use of the Chauvet/Collier estimate of the costs of poor governance is that between the Pacific island countries and the Caribbean countries. For the 12 Caribbean countries for which World Bank per capita GDP data are available, the average per capita GDP growth rate for the period 1970-2003 (not all countries have data covering the full period) is 2.76 per cent. For the ten Pacific island countries for which these data are available, the average per capita GDP growth rate is one per cent.

The Chauvet and Collier (2004) estimate of 2.3 percentage points loss of GDP for each year of poor governance is used here to make estimates of the costs of poor governance in Fiji Islands, Papua New Guinea, and Solomon Islands. It is assumed that GDP growth in the countries during the periods of poor governance would have been 2.3 per cent higher on average than actually occurred. The remaining difference between the country's trend GDP growth and the average rate of GDP growth for developing countries not suffering badly from poor governance is assumed to be due to country-specific circumstances (such as the fluctuations due to natural disasters or the civil unrest in the Solomon Islands).

### **III. PAPUA NEW GUINEA**

According to World Bank statistics, in real terms the GDP per capita of Papua New Guinea was the same in 2003 as it was in 1976, the year following independence. Simple log-linear estimates of the trend in per capita GDP in Papua New Guinea show that growth in this variable has been negligible over the past 34 years. A test of whether per capita GDP growth has performed differently since 1989, the year of closure of the Panguna mine in Bougainville, showed no difference—0.12 per cent during the pre-1989 period and 0.13 per cent during the post-1989 period. The only period when per capita GDP showed any substantial increase was during the mineral boom of the 1991-94 period. This increase was temporary.

Therefore, it is assumed that per capita GDP in Papua New Guinea has been static in real terms since independence in 1975 and that poor governance has been a major factor in this poor performance. To estimate the cost to the country of the poor governance, it is assumed that in the absence of the poor governance per capita GDP would have increased throughout the period since independence at an average rate of 2.3 per cent. In 1995 constant US dollar terms, the estimated per capita GDP loss due to poor governance over the period 1975-2003 is calculated at US\$12,000. Expressed in other terms, in the absence of poor governance per capita GDP in 2003 would have been double what it actually was (US\$1,773 versus US\$881).

According to these calculations, the total loss in GDP due to poor governance over the period 1975-2003 was US\$52.8 billion. This amount is equivalent to over ten times the value of Papua New Guinea's GDP in 2003 (US\$4,850 million in 1995 constant dollar terms). This may appear to be a large number. However, Chauvet and Collier (2004) estimate the average net present value of the future costs for a developing country and its neighbours of its poor governance is US\$82.4 billion.

What would be the likely cost of the continuation of poor governance in Papua New Guinea? If, say, the poor governance were to continue for the next ten years, and have the same adverse impact in terms of GDP growth as assumed above, the present value (discounted at 5 per cent) of the cost to the people of Papua New Guinea is estimated at US\$4.9 billion (in 1995 dollar terms).

#### **IV. FIJI ISLANDS**

For Fiji Islands, log-linear trend analysis of per capita GDP (in 1995 US dollar terms) for the period from independence in 1970 to 2003 shows that there is a structural break around 1987 (the year of the first coups). In the pre-1987 period the trend in per capita GDP is estimated to be a slight decline of  $-0.3$  per cent, while for the post-1987 period the rate of growth is a slight  $0.02$  per cent. Per capita GDP in the pre-1987 period is characterised by an upswing in the 1979-81 period (which coincides with the peak in the Investment-GDP ratio), while in the post-1987 period per capita GDP has shown some growth over the 1994-2003 period. The change from a negative per capita GDP growth trend in the pre-1987 period to a slightly positive trend in the post-1987 period could be explained by the fact that in the wake of the 1987 coups there was a period of economic reform. However, the post-1987 period has also been characterised by continuing political uncertainty (culminating in the coup of 2000), uncertainty over access to land, and the loss of skilled and highly skilled labour. Thus, the beneficial impacts of the reforms and the adverse impacts of the coups appear to have cancelled each other out.

If we assume, therefore, that there has been no growth in GDP per capita in Fiji Islands since independence, and also assume that in the absence of poor governance that GDP per capita would have increased at an average rate of  $2.3$  per cent, the gap in per capita GDP over the period to 2003 is US\$14,000 in 1995 constant dollars. This means that GDP per capita would have been US\$1,050 higher in 2003 than it actually was (\$3880 versus \$2830). Under these assumptions, the estimated total GDP foregone over the period since independence due to poor governance is calculated to be US\$10.8 billion (in 1995 dollars).

If it is assumed that there has only been poor governance in Fiji Islands since the coups in 1987, and that in the absence of the poor governance per capita GDP would have increased at  $2.3$  per cent, the loss in per capita GDP over the 1987-2003 period is estimated to be US\$5,456 (in 1995 dollars). In line with these assumptions, the loss of GDP over this period has been US\$4.3 billion (in 1995 dollars).

What would be the likely cost of the continuation of poor governance in Fiji Islands? If poor governance were to continue in Fiji Islands for the next ten years, and have the same adverse impact in terms of GDP growth as assumed above, the present value (discounted at  $5$  per cent) of the cost is estimated at US\$2.4 billion (in 1995 dollar terms).

#### **V. SOLOMON ISLANDS**

The civil unrest in the Solomon Islands over the period since 1997 had a dramatic impact on output and incomes, with per capita GDP (in 1995 constant US dollar terms) declining from the historical peak of US\$850 in 1996 to US\$534 in 2002. Log-linear trend analysis of the period since 1970 gives an estimate of the positive trend in per capita GDP of  $2.6$  per cent up to 1996.

While there was reasonably strong growth in per capita GDP in Solomon Islands over the period from Independence in 1978 to the beginning of the civil unrest, from reports of economic management and corruption in the country (for example, in the logging industry), it appears safe to assume that the country experienced poor governance during this time and therefore could have done so much better in terms of economic performance. Therefore, the costs of poor governance have been estimated for the period 1978 to 2003. As Chauvet and Collier (2004) note, civil unrest has an additional adverse impact on a country's economic performance. From their cross-country analysis, Chauvet and Collier estimate that civil unrest costs an economy an additional  $3.8$  per cent of GDP output for each year of the unrest. Therefore, in estimating the

costs of poor governance in Solomon Islands for the period 1978-2003, an adjustment of per capita GDP was made for the period 1997-2003 so that the costs of civil unrest would not be counted as costs of poor governance. Hence, for each of the years 1997 to 2002, an additional 3.8 per cent was added to the per capita GDP. For 2003, with the economy beginning to recover following the RAMSI intervention, the add-on percentage was reduced by 3.8 percentage points.

According to the calculations, the total loss of per capita GDP over the period 1978 to 2003 due to poor governance is US\$6,960 (in 1995 constant dollar terms). In the absence of both poor governance (over the 1978-2003 period) and the civil unrest (over the 1997-2002 period), the adjusted per capita GDP in 2003 is three times the actual level (US\$1,670 versus US\$538). The estimated loss in per capita GDP due to the civil unrest over the period 1997 to 2003 is US\$608.

The estimated total loss of GDP over the period 1979 to 2003 due to poor governance is US\$2.8 billion (in 1995 constant dollar terms). This is equivalent to 11.4 times the value of Solomon Islands' GDP in 2003. It is estimated that an additional US\$260 million of GDP was lost due to the civil unrest (equivalent to the value of a full year's output in recent years).

If poor governance continues in Solomon Islands, what could be the cost in terms of lost GDP? If poor governance were to continue in Solomon Islands for the next ten years, and have the same adverse impact in terms of GDP growth as assumed above, the present value (discounted at 5 per cent) of the cost is estimated at US\$250-320 million (in 1995 dollar terms), depending upon how quickly the economy recovers from the civil unrest.

## VI. NAURU

There are no historical GDP data available for Nauru. Therefore, the above exercise could not be carried out for Nauru. Obviously, there has been a horrendous economic loss suffered by this country due to poor governance. A substantial part of this loss is the almost complete loss of the trust funds established from the sales of phosphate. This has been as a result of incompetence in business deals and corruption associated with the use of the trust funds. Gosarevski *et al* (2004) have estimated that if the trust fund monies had instead been invested with conservative commercial investment brokers, they would in today's terms be valued at around Australian dollars (A\$)10 billion. In a sense, therefore, there has been a loss of A\$10 billion of assets suffered by Nauruans as the result of poor governance.

On the basis of the income received from their trust funds, in the 1970s Nauruans were believed to have the second highest incomes in the world—next to Saudi Arabia. According to the Government of Nauru's 2004-05 Budget, the country will only be able to pay its public servants (who account for the bulk of the formally employed labour force) A\$70 per week for the foreseeable future. Clearly, in the light of this change in their incomes, Nauru is an outlier in terms of the costs of poor governance.

If the country had invested its phosphate earnings wisely, and that they were today worth US\$8 billion and earning 4 to 5 per cent from interest and dividends, this would mean that the present population of approximately 12,000 would have a per capita income of around US\$20,000. Instead, their per capita GDP is probably about 1/20<sup>th</sup> of that amount.

## VII. DEVELOPMENT ASSISTANCE PROVIDED TO FIJI ISLANDS, PAPUA NEW GUINEA, NAURU, AND SOLOMON ISLANDS

Comprehensive information on development assistance since 1973 is available from the OECD's Development Assistance Committee (from their online database). Overseas development assistance for the four countries was extracted from the database. The total amount of grant assistance and the total amount of grants from each country's major donors are provided below for the periods specified.

**Table 3: Grants from Bilateral Donors, Fiji Islands, Nauru, Papua New Guinea, Solomon Islands**  
(US\$ million, constant 1995 dollars)

Donor	Fiji Islands (1973-2003)	Nauru (1975-2003)	Papua New Guinea (1973-2003)	Solomon Islands (1978-2003)
-Australia	318	61	7,400	276
-European Community	111	10	594	211
-Japan	122	5	227	108
-New Zealand	20			16
-United Kingdom			44	163
<b>Total</b>	<b>593</b>	<b>76</b>	<b>8,300</b>	<b>778</b>

Source: OECD Development Assistance Committee online data base.

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