

Chowdhury, Anis

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Growth oriented macroeconomic policies for small islands economies: Lessons from Singapore

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Research Paper No. 2008/47

Growth Oriented Macroeconomic Policies for Small Islands Economies

Lessons from Singapore

Anis Chowdhury*

April 2008

Abstract

Most small island economies or ‘microstates’ have distinctly different characteristics from larger developing economies. They are more open and vulnerable to external and environmental shocks, resulting in high output volatility. Most of them also suffer from locational disadvantages. Although a few small island economies have succeeded in generating sustained rapid growth and reducing poverty, most have dismal growth performance, resulting in high unemployment and poverty. Although macroeconomic policies play an important role in growth and poverty reduction, there has been very little work on the issue for small island economies or microstates. Most work follows the conventional framework and finds no or very little effectiveness of macroeconomic

.../.

Keywords: Caribbean, Pacific Islands, fiscal policy, small open economies

JEL classification: E5, E6, N1, O1

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* University of Western Sydney, School of Economics and Finance, email: a.chowdhury@uws.edu.au;

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policies in stabilization. They also concentrate on short-run macroeconomic management with a focus almost entirely on either price stability or external balance. The presumption is that price stability and external balance are prerequisite for sustained rapid growth. This paper aims to provide a critical survey of the extant literature on macroeconomic policies for small island economies in light of the available evidence on their growth performance. Given the high output volatility and its impact on poverty, this paper will argue for a balance between price and output stabilization goals of macroeconomic policy mix. Drawing on the highly successful experience of Singapore, it will also outline a framework for growth promoting, pro-poor macroeconomic policies for small island economies/microstates.

Acronyms

AD	aggregate demand
CPF	Central Provident Fund
ECCU	Eastern Caribbean Currency Union
GLCs	government linked companies
HDI	human development index
IMF	International Monetary Fund
SMEs	smaller and medium size enterprises

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UNU World Institute for Development Economics Research (UNU-WIDER)
Katjanokanlaituri 6 B, 00160 Helsinki, Finland

Typescript prepared by Liisa Rojonen at UNU-WIDER

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1 Introduction

One characteristic that small island economies share is vulnerability. This arises from a number of factors, such as small size, remoteness, proneness to natural disasters, and environmental fragility (see Briguglio 1995; Atkins, Mazzi and Easter 2000). They are also very open economies with a high trade-GDP ratio, but their export base is very narrow, dominated by primary products and natural resources. They are largely dependent on external financial assistance, and their financial sector is extremely shallow. Thus, small island economies are subject to external disturbances from the world goods and financial markets. As a result, small island economies experience significant volatility in their economic growth.

While most observers believe that small island economies are structurally disadvantaged, some hold the view that they also have advantages. Kuznets (1960), for example, notes the advantage of a small and more cohesive population which allows them to adapt better to change. Easterly and Kraay (2000) argue that the growth advantages of openness (trade and investment) outweigh the disadvantages in terms of trade volatility, and hence, small states do not necessarily have a poorer economic performance than larger countries.¹ Nevertheless, real per capita GDP growth tends to be much more volatile in smaller economies than in larger ones, and there is a growing consensus that high output or growth volatility adversely affects the poor. That is, the poor are more vulnerable to shocks and macroeconomic volatilities (see de Ferranti et al. 2000; World Bank 2000). The poor have less human capital to adapt to downturns in labour markets. They have less assets and access to credit to facilitate consumption smoothing. There may be irreversible losses in nutrition and educational levels if there are no appropriate safety nets, as is usually the case in most developing countries. The *World Development Report 2000/2001* (World Bank 2000) finds an asymmetric behaviour of poverty levels during deep cycles: poverty levels increase sharply in deep recessions and do not come back to previous levels as output recovers.²

This is an important observation in light of the orthodox macroeconomic policy package designed by the International Monetary Fund (IMF) since the early 1980s. The focus of such policies has been almost entirely on either price stability or external balance. The presumption is that price stability and external balance are prerequisites for sustained rapid growth. Using the macroeconomic experience of the Caribbean and Pacific Island economies, this paper will argue for a balance between price and output stabilization goals of macroeconomic policy mix. This paper also takes a contrary view to the conventional wisdom that small open island economies do not have much control over their macroeconomic instruments. The experience of Singapore shows that an island economy can successfully stabilize both the employment and price levels by adopting innovative

¹ In a cross-country regression with 157 countries, Easterly and Kraay (2000) find that: 'microstates are 50 per cent richer than other states, controlling for location'. In a sample of 48 countries, Milner and Westaway (1993) find no significant evidence of the effect of country size on economic growth. Also, Armstrong et al. (1998) find in their cross-country regressions no significant effect of population size on economic growth. Srinivasan (1986) and Streeten (1993) argue that small may be beautiful. Singapore and Hong Kong are examples of two highly successful yet small economies.

² Scatter plots of a large number of cross-country data reveal that the variability of nominal GDP growth has a negative correlation with the growth of the average income of the poorest fifth of the population, and a positive correlation with inequality (measured by the Gini coefficient). See Chowdhury (2006). Also see Glewwe and Hall (1998).

macroeconomic policy-mixes. Drawing on Singapore experience, this paper will outline a framework for growth promoting, pro-poor macroeconomic policies for small island economies/microstates.

2 Economic characteristics of Caribbean and Pacific Island economies

Table 1 lists basic socioeconomic indicators of Caribbean and Pacific Island economies. Table 2 lists their vulnerability index and output volatility index. As can be seen, despite their smallness and high vulnerability, their real GDP per capita (in PPP terms) is reasonably high when compared with larger developing countries. A number of Caribbean Island economies also have a high human development index (HDI), while the rest are ranked as medium human development countries. Analysing the relative performance of

Table 1
Size and socioeconomic indicators of the Caribbean and Pacific Island economies, 2003

Economy	Area (thousands km ²)	Population (thousands)	Real GDP per capita (PPP\$)	HDI
Caribbean Island states (2003)				
Antigua & Barbuda	0.44	74	5,469	0.800
Bahamas	14.0	312	17,012	0.826
Barbados	0.43	272	15,494	0.871
Belize	23.0	290	5,606	0.784
Dominica	0.75	72	5,880	0.779
Dominican Republic			6,033	0.727
Grenada	0.34	102	7,580	0.747
Guyana	216.0	762	3,963	0.708
Haiti			1,467	0.471
Jamaica	11.0	2,600	3,639	0.742
St Kitts & Nevis	0.27	50	12,510	0.814
St Lucia	0.62	167	5,703	0.772
St Vincent & the Grenadines	0.39	112	5,555	0.733
Suriname	164.0	439	3,799	0.756
Trinidad & Tobago	0.44	1,300	8,964	0.805
Pacific Island states (2003)				
Cook Islands	0.24	na	na	na
Federated States of Micronesia	0.70	19	na	na
Fiji	18.27	810	4,668	0.758
Kiribati	0.69	100	1,475*	na
Marshall Islands	0.18	200	1,970*	na
Nauru	0.02	na	na	na
Palau		52	na	0.535
PNG	462.24	589	2,280	0.65
Samoa	2.94	169	5,041	0.622
Solomon Islands	27.56	442	1,648	na
Tonga	0.75	100	3,740*	na
Tuvalu	0.03	10	na	0.542
Vanuatu	12.19	91	2,808	

Note: * = 1999.

Source: World Bank (2000); UNDP (various years).

Table 2
Composite vulnerability and output volatility index of Caribbean and Pacific Island economies

	Composite vulnerability		Output volatility	
	Index	Rank	Index	Rank
Caribbean Islands				
Antigua & Barbuda	10.621	2	13.38	2
Bahamas	10.368	4	7.37	24
Barbados	5.780	38	4.34	73
Belize	6.854	25	9.63	14
Dominica	8.138	15	6.12	40
Dominican Repub.	4.680	91	5.52	54
Grenada	8.232	14	6.89	30
Guyana	7.976	16	11.87	4
Haiti	4.366	97	5.86	51
Jamaica	7.426	19	3.43	90
St. Kitts & Nevis	6.388	29	5.97	49
St. Lucia	7.469	18	6.59	34
St. Vincent & the Grenadines	4.736	89	6.08	42
Suriname	5.055	60	7.56	23
Trinidad & Tobago	5.358	49	8.75	17
Pacific Islands				
Fiji	9.034	9	6.84	31
PNG	6.182	31	5.03	64
Samoa	7.345	20	6.92	29
Solomon Islands	8.389	11	11.21	8
Tonga	10.470	3	13.18	3
Vanuatu	13.343	1	3.61	89

Note: Rank amongst 110 developing and island states.

Source: Commonwealth Secretariat (2000).

small island developing economies, Lino Briguglio (1995: 1622) wondered: ‘whether the economic fragilities of small island developing economies are actually the reason for their relatively high GDP per capita and human development index’.

The high real per capita income and HDI may, therefore, give an impression that poverty in the Caribbean and Pacific Islands is not as acute as in other countries. However, surveys of living conditions conducted between 1996 and 2002 in the Caribbean reveal a very different picture. These surveys used poverty measures in terms of the ability to buy a basic consumption basket of food and non-food items, such as education, housing and transportation. According to these surveys (see Figure 1), Haiti and Suriname are at the high end of the spectrum with an estimated poverty incidence of 65 per cent and 63 per cent, respectively. Clustered in the 30-40 per cent range are Belize, Dominica, Grenada, Guyana, St Kitts and Nevis, and St Vincent and the Grenadines. The estimated poverty rates in Anguilla, St Lucia and Trinidad and Tobago range between 20 per cent and 29 per cent, while they are 14 per cent and 20 per cent, respectively in Barbados and Jamaica.³

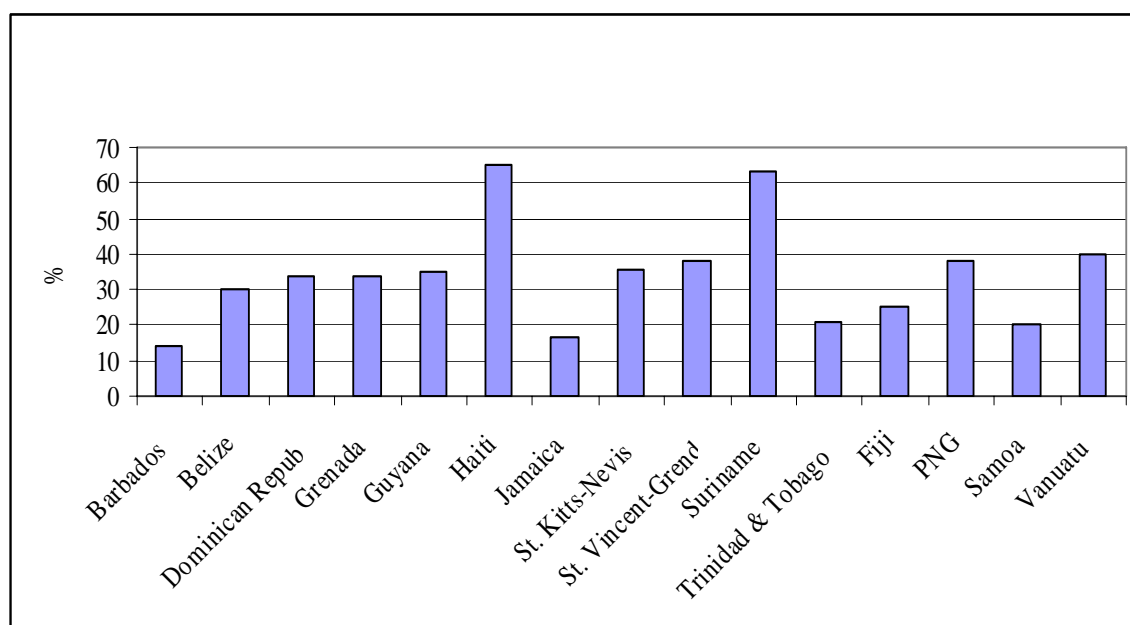
The quality of life is equally dismal in the Pacific Islands. For example, in Papua New Guinea (PNG) and Vanuatu 38-40 per cent of the population lives below the national

³ These figures are cited from Bourne (2005).

basic needs poverty line,⁴ and about 61 per cent do not have access to safe water. While 58 per cent of children are receiving education in Vanuatu, the figure is only 41 per cent in PNG. In Fiji, the percentage of the population living below the national basic poverty line in Fiji is 25 per cent, and 53 per cent of the population do not have access to safe water. The poverty rate in Samoa is about 20 per cent, and in the Solomon Islands only 52 per cent of children are enrolled in education.

What is more disturbing is the vulnerability of the population to poverty. For example, in Jamaica the poverty rate goes up from 3.2 per cent to 25.2 per cent when the international poverty line moves from \$1-a-day to \$2-a-day. In Dominican Republic, the poverty rate jumps from 3.2 per cent to 16.0 per cent, and in Trinidad and Tobago, it rises from 12.4 per cent to 39.0 per cent with the upward adjustment of the international poverty line.⁵ This means a large number of people live just above the poverty line, and any sustained adverse shock to the economic can push them to poverty. Therefore, it is important to analyse the sources of volatility in order to stabilize income and employment growth at a high level.

Figure 1
Poverty rate, selected Caribbean and Pacific Island economies, per cent



Source: Bourne (2005); Oxfam (2007); Abbot and Pollard (2004); UNDP (various years).

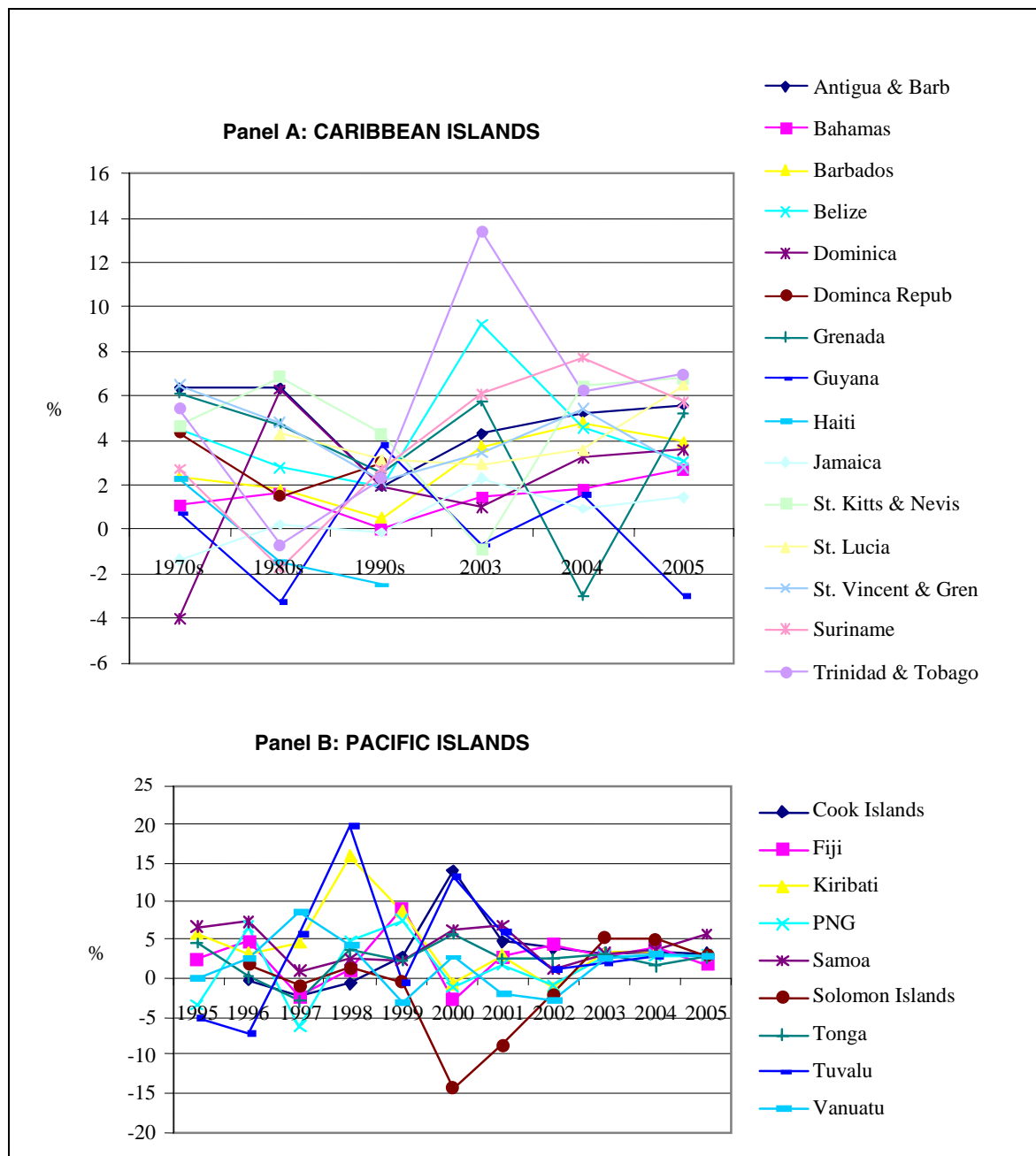
3 Macroeconomic performance and sources of volatility

As can be seen from Panels A and B in Figure 2, extreme volatility is the hallmark of both Caribbean and Pacific Islands, and for most, growth remains subdued, averaging at less than 4 per cent. This is despite the fact that most have been quite successful in containing the inflation rate at less than 4 per cent. This indicates that price stability or

⁴ National basic needs poverty line is a measure of the minimum income needed to buy sufficient food and meet basic needs such as housing, clothing, transport, school fees, etc. (Oxfam 2007).

⁵ These figures are from UNDP (2002).

Figure 2
GDP growth in the Caribbean Islands and in the Pacific Islands



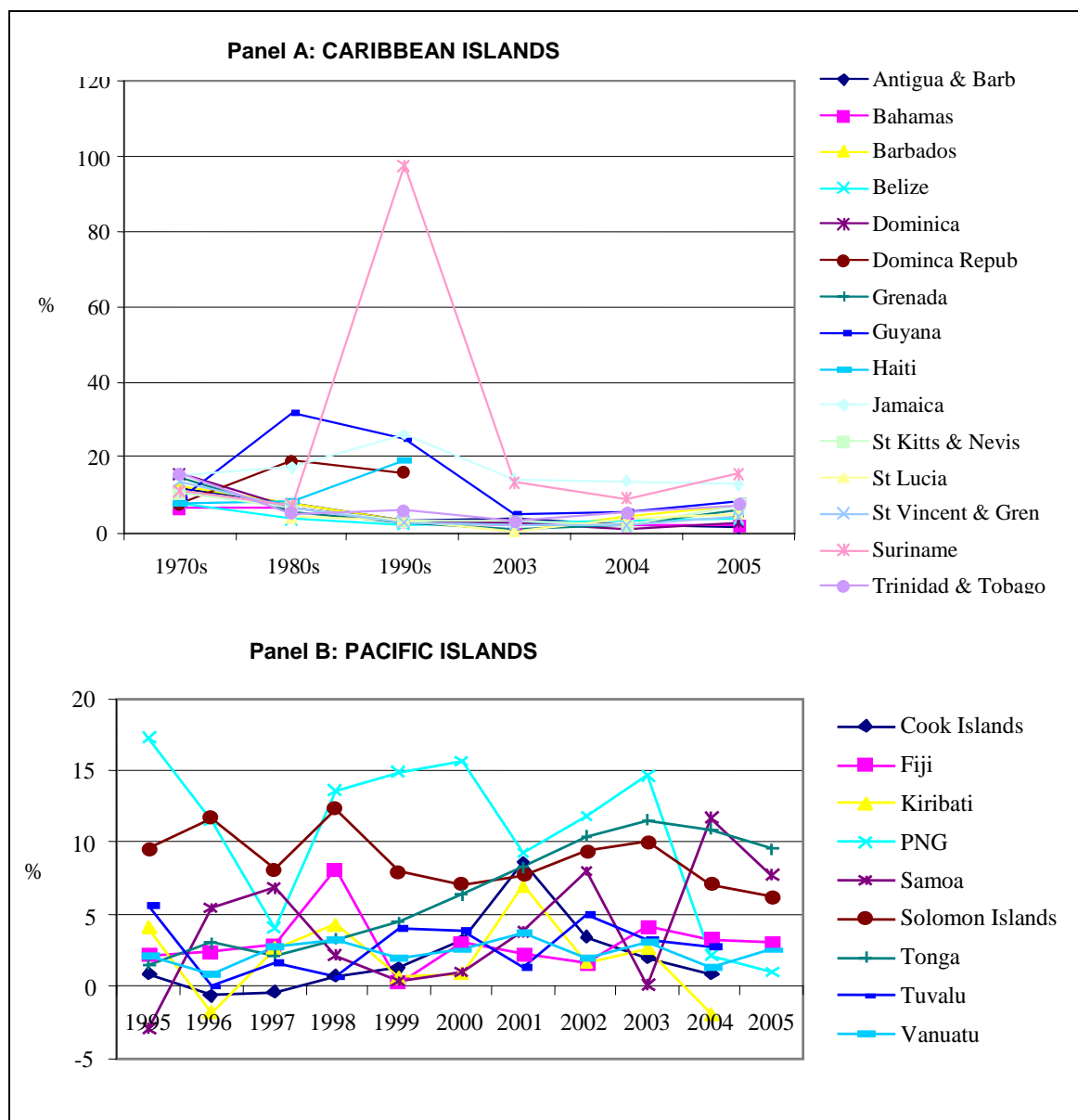
Source: World Bank (2002b) and ECLAC (2006) for the Caribbean Islands, and ESCAP (2006) for the Pacific Islands.

low inflation may be a necessary, but not a sufficient condition for sustained economic growth.⁶ Volatility of growth itself may affect growth, as economic instability tends to skew investment towards short-run gains in a non-optimal way (Perry 2003).

⁶ Fichera (2006: 51), in reviewing the macroeconomic performance of the Pacific Islands and the Eastern Caribbean Currency Union countries, remarks: 'policies ... although effective at maintaining relative macroeconomic stability over 1995-2004, have not been effective at promoting growth. Clearly, while macroeconomic stability is a necessary condition for growth, it is not sufficient'.

Importantly, economic volatility affects more adversely the employment and incomes of less skilled workers, who do not have adequate coping mechanism. The absence of publicly funded well-targeted safety nets accentuates the problem. Thus, in addition to hard-core poor, a large number of people remain vulnerable to shocks to the economy. Hence, macroeconomic policies should aim not just at price stability, but also at output and employment stabilization, especially when shocks originate from the supply side.⁷

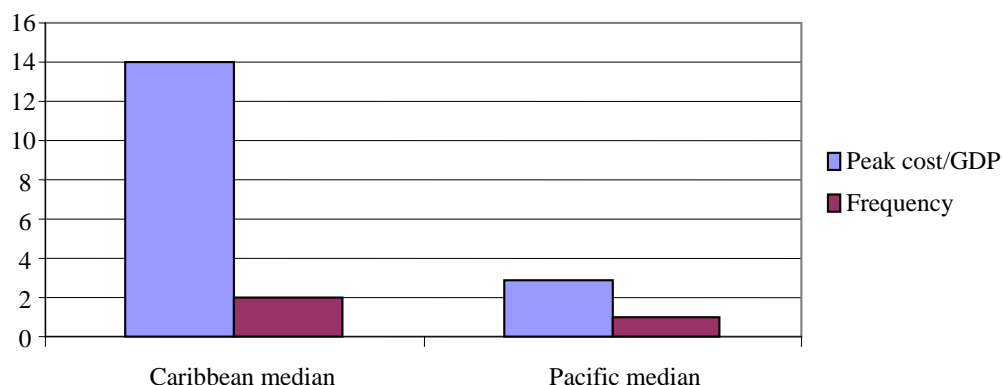
Figure 3
Inflation in the Caribbean Islands and the Pacific Islands



Source: World Bank (2002b) and ECLAC (2006) for the Caribbean Islands, and ESCAP (2006) for the Pacific Islands.

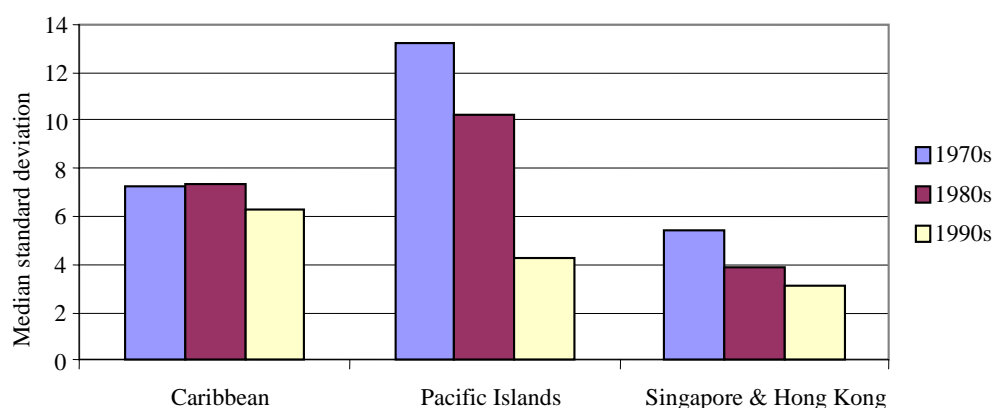
⁷ Interestingly, contrary to what has become known as the so-called ‘Washington consensus’ as pursued by the IFIs that aimed solely on stabilizing the nominal variables (e.g., inflation), the originator of the Washington consensus, John Williamson did include the need to stabilize the real economy *a la* Keynes in his list of ‘good policies’. See Williamson (2004).

Figure 4A
Frequency (per year) and costs of natural disasters, 1970-2000



Source: World Bank (2002a).

Figure 4B
Volatility in terms of trade



Note: Terms-of-trade shocks are defined as $(\text{trade}/\text{GDP}) \times (\text{change in terms of trade})$.

Source: World Bank (2002a).

It is well accepted that the island economies are particularly prone to natural disasters (Figure 4A). As Figure 4B shows, Caribbean and Pacific Island economies have also suffered larger terms of trade shocks than two successful island economies, Singapore and Hong Kong. A relatively favourable disposition certainly has played a role in Singapore and Hong Kong's better macroeconomic and growth performance. Nonetheless, their economic condition was not hugely different in the 1950s and 1960s from the Caribbean and Pacific Islands, with widespread unemployment and poverty.⁸ Economic policies and the activism of the government, especially in Singapore, have been largely responsible for the turnaround in their fortunes. In addition, both Singapore and Hong Kong are better able to absorb shocks due to the depth of their financial sector.

⁸ Singapore's poverty rate was nearly 25 per cent in the mid-1950s, and even in 1970, the unemployment rate was over 8 per cent.

While the island economies are subjected to mostly adverse supply shocks, nearly all of them followed conservative macroeconomic policies, as required by their adjustment package with the IMF.⁹ This is evident from Figure 5A, which shows the growth rates of domestic credit to the private sector. As can be seen, domestic credit grew at a much faster rate in Singapore and Hong Kong. In the case of the Caribbean countries, domestic credit to the private sector remained more or less stagnant since the 1980s. That is, the monetary policy stance in these countries has been by and large contractionary.

There is a consensus that fiscal policy in most poor countries with a weak revenue base tends to be procyclical.¹⁰ Government revenue in the small Caribbean and Pacific Island economies depends excessively on trade taxes and foreign aid. Thus, trade shocks and aid volatility are a major source of instability in government revenue. If foreign aid flows do not match the loss of revenue during adverse shocks, governments are forced to cut investment expenditure, since it is politically difficult to cut the non-development expenditure, such as civil servant salaries or various subsidies and welfare programs. This exacerbates the impact of shocks, as well as harms the long-term growth potential. This kind of adjustment was observed particularly in the Pacific Island economies, where development expenditure which was already too low as a percentage of public spending. However, there have been some differences in the fiscal policy response of the Eastern Caribbean Currency Union (ECCU) governments. They:

dedicated a large share of their spending to public investment, particularly during the 1980s, when external assistance was abundant. In the late 1990s and early 2000s, these countries raised public spending, including for investment, trying to offset exogenous shocks on growth and declining private investment (Fichera 2006: 50-1).

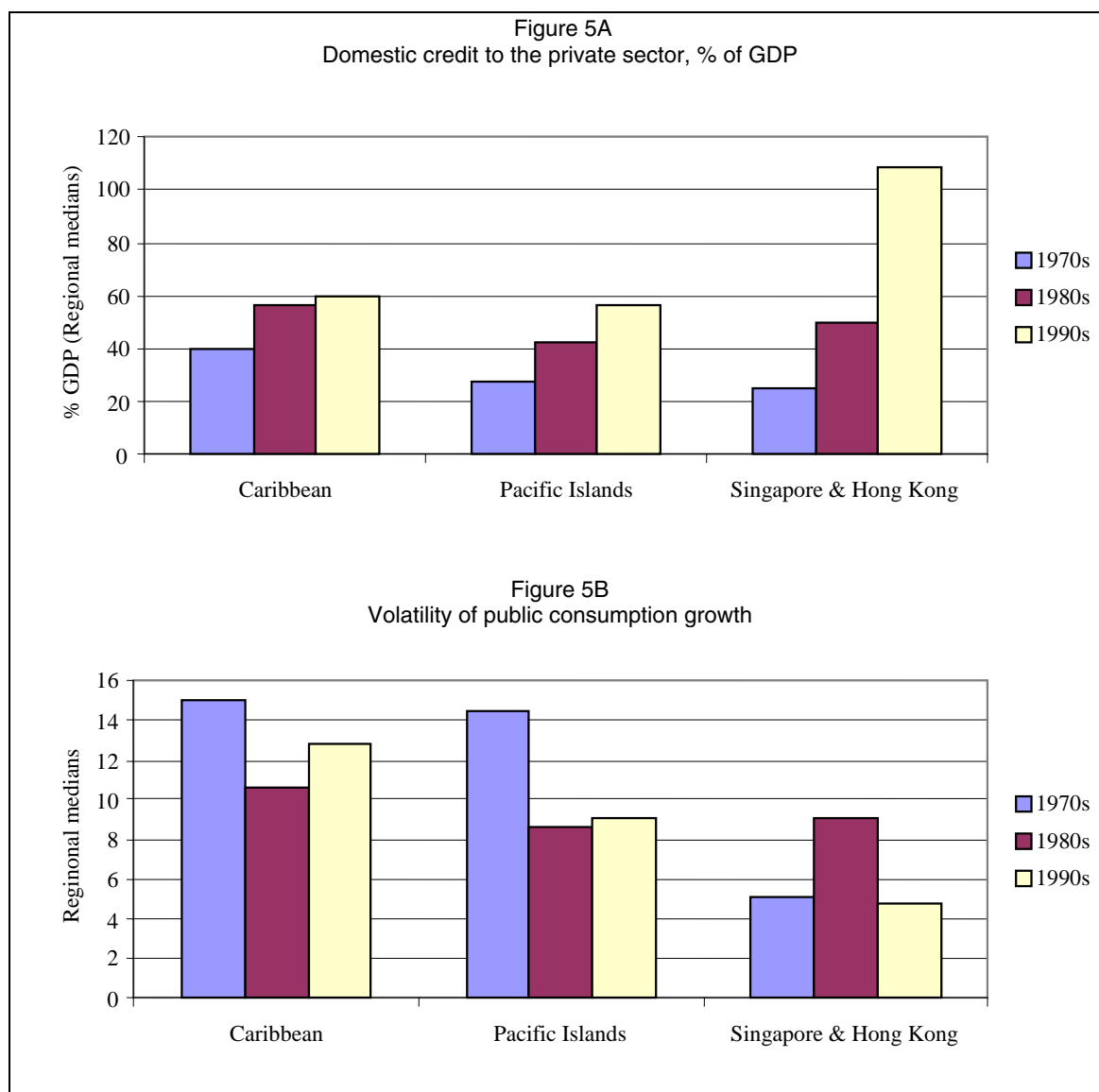
As a result, the ECCU countries grew at a faster rate. Even the worst performing ECCU country experienced positive growth (2.5 per cent on average) in per capita income during 1995-2004.

Figure 5B shows that public consumption growth has been highly volatile in both Caribbean and Pacific Island economies. Perry (2003) finds that fiscal volatility accounts for 15 per cent among the causes of excess volatility in Latin America and the Caribbean. This excessive volatility in the growth of public consumption is largely due to boom-bust nature of the revenue, and results in procyclical fiscal policy. Thus, one can reasonably conclude that procyclical fiscal policy and tighter monetary policy aimed solely at price stability in the wake of exogenous supply shocks exacerbated the impacts of shocks.¹¹ This brings us to the critical issue of the role of macroeconomic policies.

⁹ See Worrell (1987) for the experience of Caribbean economies. For the Pacific Islands experience, see Siwatibau (1993).

¹⁰ Eslava (2006) surveys the literature on the determinants of procyclicality of fiscal policy. Also see Gavin et al. (1996) for the Latin American and Caribbean context.

¹¹ ECLAC (2006: 36) in its *Survey of Latin America and the Caribbean, 1999-2000* comments: 'The priority given ... to fighting inflation and restoring credibility of stabilization policies had given a procyclical bias to macroeconomic policy...'



Source: World Bank (2000).

The recent empirical growth literature shows that there is a strong negative correlation between procyclical fiscal behaviour and the rate of long-term growth. On the other hand, countercyclical fiscal policy enhances growth possibility by providing fiscal reliefs (tax cuts and subsidies) to the struggling private sector during economic downturns, as well as by boosting government investment in key economic and social sectors.¹²

The restrictive monetary and procyclical fiscal policy stance not only accentuates the depth of economic contraction and harms long-term growth, but also has an asymmetrically adverse impact on the poor. To begin with, a tighter credit policy affects small- and medium-size enterprises (SMEs), which depend mostly on bank financing, more than it affects the larger firms. This has adverse employment impacts for the low-skilled workers, as evidenced by the negative correlation between the volatility of

¹² United Nations' *World Economic and Social Survey 2006* (chapter IV) provides a brief summary of literature on the economic and social consequences procyclical macroeconomic policies.

nominal GDP and the income growth of the poor.¹³ Studies also find that social expenditures are kept at best constant as a percentage of GDP during downturns, and the more targeted social expenditures tend to fall as a percentage of GDP, when they should expand as the number of poor and unemployed increases.¹⁴

4 Role of macroeconomic policies

4.1 Conventional macroeconomic models for small open economies

What role can macroeconomic policies play in very open small island economies? Khatkhate and Short (1980) believe very little. According to them, the degree of policymakers' control over macroeconomic target variables (e.g., output, inflation and external balance) is inversely proportional to the degree of openness of the product market.¹⁵ The fact that mini states are pricetakers in the international market, the volume of exports, and therefore output, is determined by the mini state's productive capacity, which is influenced more by such factors as weather than macroeconomic policies. Being at the same time highly import-dependent, their inflation is by and large determined by their trading partners.

Corden (1984), on the other hand, using the example of Singapore, develops a model of a small open economy where all products are tradable, and demonstrated that exchange rates can be used to target inflation and wages policies to target competitiveness, and hence, employment. Since the aggregate demand for output is perfectly price elastic, *domestic* demand, and hence monetary policy and fiscal policy, do not have any direct effects on the price level or employment.¹⁶ To the extent that the monetary authority pegs the exchange rate to a pre-determined level, money supply becomes endogenous. Thus, monetary policy works only through its effects on the exchange rate. When the exchange rate is allowed to float, perfect capital mobility renders fiscal policy ineffective due to induced exchange rate effects.¹⁷

¹³ See Chowdhury (2006).

¹⁴ See the World Bank study by de Ferranti et al. (2000).

¹⁵ 'by its [mini state's] exposure to foreign trade such that the economic targets of its economy are largely beyond its control' Khatkhate and Short (1980: 1018). Caram (1989) holds a very similar view: 'Under the conditions now prevalent in small developing countries, it is not to be expected that monetary financing and the ensuing increase in effective demand will result in an appreciable increase in domestic production. The domestically generated supply of goods is insufficiently diversified and, as a result of physical and organizational bottlenecks, has barely any short-term elasticity. Owing to this and to the ample opportunities for imports, despite the exchange controls in force, the additional demand will focus largely on the supply from abroad. The so-called monetary approach to the balance of payments ... proves to be highly topical for these countries'.

¹⁶ In an economy (closed or open) with a downward aggregate demand (AD), expansionary monetary and fiscal policies work by raising the price level. Increased price level reduces real wage and hence increases employment and output. But when an economy faces a perfectly price elastic AD, the domestic price level cannot differ from the world price.

¹⁷ This follows from the standard Mundell-Fleming IS-LM-BP model with flexible exchange rates and perfect capital mobility.

Treadgold (1992) provided a critique of Khatkhate and Short, and extended Corden's model to suit the conditions of small Pacific Island economies. To begin with, a number of Caribbean and Pacific Island economies do not have separate currencies; they use either US, Australian or New Zealand dollars. Thus, they cannot have the exchange rate instrument as suggested by the Corden model, but they can still use wages policy for employment target. Second, even for those economies which have their own currencies, the assumption of perfect capital mobility is not relevant, as this would require perfect substitutability between domestic and foreign bonds. However, even when the assumption of perfect capital mobility is replaced with incomplete capital mobility, Treadgold shows that under different labour market conditions, the policy implications of the basic Corden model remain relevant. When *money* wages are inflexible downward, the achievement of the employment target would require abandoning an independent inflation target. That is, the exchange rate should be varied to achieve the domestic inflation needed to reduce real wage for the employment target. On the other hand, the downward *real* wage inflexibility excludes the possibility of achieving any independent employment target, and macro policy (i.e., exchange rate policy) should be directed to controlling the price level only. Finally, the microstates which experience a high degree of labour mobility with larger economies essentially face a given real wage determined in the larger economies. Their labour market mimics a competitive labour market, and hence, employment is determined endogenously. As in the case of downward real wage inflexibility, these microstates should use the exchange rate to achieve the inflation target.

In sum, fiscal and monetary policies cannot play stabilizing roles in any of the three theoretical models reviewed above. In the Corden model and its modified version, the stabilization (price level and employment) role is assigned to the exchange rate and wages policies. The fact that some Caribbean and Pacific Island economies could successfully maintain very low inflation rates by using conventional demand management policies proves Khatkhate and Short's conclusion wrong. To the extent that the effectiveness of policy instruments (exchange rates) in the Corden-Treadgold framework depends on falling real wages, it does not offer much hope in economies where poverty is high and real wage is at the subsistence level. In these countries, real wage resistance does not have to be an outcome of a centralized wage-setting mechanism and/or the nature labour market institutions. Real wage is already so low that it cannot be reduced any further.¹⁸

All three models focus on the demand-side role of fiscal and monetary policies and ignore the fact that in developing countries, these policies are used predominantly for economic growth and hence enhancing aggregate supply. Thus, employment creations in these models imply movement along the labour demand curve (i.e., the reduction in real wage). They also assume symmetry in both capital inflows and outflows, and consider only short-term portfolio investment, not long-term foreign direct investment. Most developing countries, especially the small Caribbean and Pacific Island economies, do not attract much capital flows. As noted earlier, vulnerability risks outweigh the expected gains from interest rate differentials, and they are more prone to capital flights than capital inflows. For their long-term economic growth, they need foreign direct investment and foreign aid, which are not sensitive to interest rate differentials. Once these considerations are taken into account, fiscal and monetary

¹⁸ Lodewijks (1988) deals exhaustively with the limitations of real wage cuts in the context of PNG.

policies assume radically different roles from what can be derived from the Mundell-Fleming model and its variants.

In particular, when the direct long-term (growth) and short-term (demand) aspects of macroeconomic policies are juxtaposed or treated simultaneously, employment creations do not depend on lower real wages (movement along the demand curve); instead, employment is created by shifting the labour demand curve. That is, what is needed in fragile economies such as Caribbean and Pacific Islands is state-led development strategies.

4.2 Lessons from Singapore

The conventional wisdom is that Singapore pursues conservative macroeconomic policies as is evident from its large foreign reserves and budget surpluses. However, close observers of Singapore believe that the use of government budget surplus is a misleading indicator of government's fiscal stance due to the presence of various statutory boards and a large public sector. By the mid-1980s, prior to the start of privatization, there were about 490 government linked companies (GLCs) and 30 statutory boards which had substantial monopoly power. Government often used these GLCs and statutory boards to pump-prime the economy whenever there was any sign of economic downturns. These measures do not show up in the budget of the government. Profits from GLCs and statutory boards subsidized deficits in government priority areas like housing which kept up the effective demand. Thus, Toh (2005: 43) draws attention:

Far from non-intervention, the government believes in short-term discretionary measures to even out adverse impacts caused by the international business cycle and changing economic trends. Fiscal policy is a key instrument for aggregate demand management.

In a rigorous study by using the IMF methodology of fiscal stance, Nadal-De Simone (2000) notes that contrary to the common view, fiscal policy in Singapore during 1966-95 was not contractionary most of the time. Although the fiscal policy multiplier is found to be small due to the openness of the economy, the government did not shy away from using it, as it relied on the crowding-in factor of infrastructure and social investment.

Fiscal policy in Singapore is used predominantly to promote non-inflationary economic growth—supporting investment, entrepreneurship, and job creation. GLCs and statutory boards were created since the late 1960s to jumpstart industrialization. The government also owned the largest bank, Development Bank of Singapore. Huff (1995) notes that government expenditure on infrastructure, accounting for 38 per cent of all gross capital formation, played a large role in Singapore's annual real GDP growth of 5.7 per cent during the early phase (1960-66) of its development.

Singapore was able to undertake public sector investment in a massive scale without incurring unsustainable debt and inflationary pressure due to its savings policy. There are three aspects of its national savings policy. The first is the strict adherence to the principle of achieving a surplus (or at least not run a deficit) in the current account of the government. Second, the government followed the commercial principle of profit generation for the GLCs and statutory bodies. Thus, primary budget surplus and profits

from GLCs and statutory boards contribute substantially to the public sector savings. Finally, the scheme of compulsory contribution to the Central Provident Fund (CPF) forces every employee to save. The combined contribution by both employees and employers rose to 50 per cent of the payroll at its peak in the mid-1980s. These measures raised national savings from about 12 per cent of GDP in 1965 to close to 45 per cent of GDP in 2004.

The CPF scheme has been instrumental for non-inflationary development financing. First, the government could access a large pool of funds and did not have to borrow from the monetary authority which is inflationary. Second, the compulsory contribution to the CPF dampened demand pressure coming from public investment. It acted like an automatic stabilizer for inflation. Critics argue that GLCs together with the public sector crowd out private enterprise. However, there is little evidence of that in Singapore. 'Every \$1 increase over the preceding decade in public sector capital formation was associated with an increase in private sector capital formation of \$3 during the 1970s and \$2.8 for 1980-1992' (Huff 1995: 747).

For Singapore, being highly dependent on external trade, management of the exchange rate has been crucial. The Singapore dollar exchange rate is based on a managed float system. The Monetary Authority of Singapore manages the float within a target band based on an undisclosed trade-weighted basket of the currencies of Singapore's major trading partners. Given the openness of Singapore with high import content, this seems to be a very sensible policy, as contractionary monetary or interest rate policy can only have limited effect on inflation, domestic inflation was kept low by allowing the exchange rate to appreciate in line with foreign inflation (Huff 1995: 752). Furthermore, reduction of the volatility of the exchange rate arising from exchange rate targeting may reduce uncertainty and hence promote trade.

In order to retain some control on the monetary policy while following a managed exchange rate, Singapore had a number of measures. They included withholding tax on interest earned by non-residents on Singapore dollar holdings, preventing banks from making Singapore dollar loans to non-residents or residents for use outside Singapore, except to finance external trade. These amounted to restrictions on short-term capital flows while Singapore always welcomed foreign direct investment.

Finally, Singapore used wages policy to complement its growth oriented fiscal and monetary policies. Through the regulation of the labour market (partly by legislation barring activist trade unionism and partly by regulating the foreign labour supply) and the tripartite wage determination at the National Wages Council, Singapore ensured that its unit labour cost remained internationally competitive.

5 State-led development strategy

This section outlines some basic features of state-led development strategy.

5.1 Fiscal policy

Given the poor state of infrastructure, human resources and other critical factors for economic growth, and the lack of private investment in these areas (due to market

failure or inadequate markets), the government has to play a leading role. This means a predominant role for fiscal policy both for the development and stabilization of economic cycles. This is, indeed, the recommendation of a recent IMF sponsored study of the Pacific Island economies.

In the Pacific, the discouraging effects on private investment of high-cost, low-quality utilities are aggravated by poor infrastructure. The region's governments, together with donors, need to strengthen public investment efforts and ensure that such programs focus on developing physical and human capital that complement rather than substitute for private sector investment (Fichera 2006: 53).

Obviously the question arises as to the financing of deficits and its implications for inflation and external balance, as well as the sustainability of government debt. First, we should note the 'golden rule'—borrow to finance investment and balance recurrent/routine expenditure. If borrowing is done to invest productively, then debt will remain sustainable—economic growth will generate revenues to repair the budget deficit. Second, the aim should be to maintain debt sustainability over the cycle. That is, to have the political will to offset higher deficits incurred during downturns with higher revenues during the upswings. This may also mean adjusting back the safety-net and reducing the expenditure designed to jump-start the economy as well as expanding the revenue base.

It is to be noted that a number of Caribbean and Pacific Island economies have fiscal stabilization funds. Reserves are accumulated in these funds during commodity booms to be used during the downswings. However, there are considerable doubts about the robustness of the political system, and elites in Caribbean and Pacific Island economies needed to prevent procycle bias of fiscal measures. Nonetheless, a number of institutional measures can be suggested to ensure the viability of countercyclical fiscal measures. For example, Perry (2003) believes that legislations regarding the government's fiscal behaviour during upswings and downswings of the economy can potentially remove the pro-cycle bias of fiscal policy.¹⁹ However, the fiscal rule faces the dilemma between flexibility and credibility. Too rigid a rule to achieve credibility may lead to high costs in forgone flexibility. The fiscal rule to support countercyclical fiscal measures must also ensure long-term debt sustainability. Designing rules to balance between flexibility, credibility and sustainability may not be an easy task. Reviewing a number of countries that have some kind of fiscal rules, Perry finds the rule recently adopted by Chile requiring structural balance or model structural surplus most useful.²⁰

However, given the development needs of the small island economies, the fact remains that the governments will have to borrow in the short to medium-terms. Due to poor credit rating in the international capital markets and the lack of a well-developed domestic capital market, the governments have two options for borrowing:

¹⁹ Singapore has a legislation barring the current government's access to accumulated reserves to prevent politically motivated expenditure.

²⁰ Application of Chilean type fiscal rule requires improvement of fiscal accounting, reliable estimation of potential output, and revenue elasticities. Countries would also have to develop ways to adjust for the cyclical components in interest rates.

(i) borrowing from central banks and (ii) foreign aid. Foreign aid, indeed, has been a significant source of government financing in both Caribbean and Pacific Island economies.

Borrowing from central banks

Borrowing from central banks will increase money supply.²¹ The endogeneity of money supply will prevent interest rates from rising, and hence, there will be no possibility of a crowding-out effect. On the contrary, government investment in infrastructure and human resource development is likely to crowd-in private investment.²² While improved infrastructure reduces business costs, subsidized provisions of public health and education can be regarded as social wage, which dampens wage demand. Both factors enhance the investment climate.²³

Additionally, since the productive capacity of the economy is likely to expand with public investment, the increase in money supply will not be as inflationary. In any case, a moderate level of inflation is not found to be harmful for economic growth.²⁴ In the absence of a well-developed taxation system, inflationary tax (or seigniorage) becomes an important source of government revenue for financing development.²⁵

Foreign aid

It is a non-inflationary source of finance for the government. Foreign aid already plays a significant role. Pacific Island economies are one of the highest aid recipients among the developing world. There is a general perception, however, that the large aid flows failed to spur rapid economic growth.²⁶ A recent comprehensive study of seven Pacific Island economies, however, finds a statistically significant positive relationship between aid and growth with diminishing returns (Pavlov and Sugden 2006).²⁷ This finding is consistent with findings elsewhere and is not sensitive to either the policy environment or institutions. One recent World Bank study (2002a) also reports a positive relationship between foreign aid and economic growth in the Caribbean region. Thus, the findings

²¹ This option is available only to countries with their own currencies, controlled by a monetary authority. The option is also limited for countries with a currency board that links domestic money strictly to the availability of foreign currencies.

²² World Bank (1998: xii), notes that in Pacific Island economies, “Basic education, health care, and physical infrastructure are the highest priorities to improve living standards for the widest group of poor people, and to lay the foundations for sustained, broad-based income growth.”

²³ This is in fact the experience of the successful East and Southeast Asian economies.

²⁴ See Chowdhury (2006).

²⁵ See Kalecki (1976).

²⁶ See, for example, Feeny (2007). However, a negative correlation between aid flows and economic growth could be just a statistical artefact. It may be due to the fact that in most cases, aid flows respond to natural disasters and other negative supply shocks which retard growth. None of the studies that report a negative aid-growth relationship conducted any counter-factual analysis. That is, what would have happened in the absence of aid? If aid responds to negative supply shocks then the non-availability of aid is likely to exacerbate the impact of negative supply shocks and there would be a deeper drop in income.

²⁷ The seven Pacific Island economies studied are Cook Islands, Fiji, Kiribati, Samoa, Solomon Islands, Tonga and Vanuatu.

imply that much of the lessons learnt in other countries are largely applicable to the Caribbean and Pacific Island economies.

The apparent lack of aid effectiveness or diminishing returns to aid can be traced to a number of confounding factors. First is the uncertainty of disbursements and the divergence between commitments and disbursements. Aid volatility can cause significant problems for project implementation and government budget. Second, aid is fraught with principal-agent problems. The recipient countries not only renege on commitment to reforms, but also divert aid funds to undesirable uses, such as government consumption or development projects chosen purely on political grounds.

Third, diminishing returns to aid could result from the lack of absorptive capacity. This may arise from a number of reasons, such as inability to provide counter-fund, deficiencies in planning and sequencing, as well as lack of administrative capacity. Finally, large aid flows can cause real appreciation of local currencies to the detriment of the tradable sector, known as *Dutch disease syndrome*.²⁸

The key element for addressing the above issues is the predictability of aid flows and confidence in the donor-recipient relationship. The Caribbean and Pacific Island economies experience high volatility of fiscal revenues due to their heavy reliance on trade. Aid is needed to smooth out fluctuations in revenues and should not be another source of shocks to the budget. Perhaps a 'fiscal insurance scheme' could be developed for the respective regions with donor funds to address volatility in fiscal revenues.²⁹ That is, donors can contribute a certain portion of aid to a regional common pool to be drawn by the country facing unforeseen declines in fiscal revenues. The recipient countries should also contribute to this regional common pool a certain portion of their revenue windfalls.³⁰ A jointly managed regional common pool or the fiscal insurance scheme as suggested above can play a positive role in improving donor-recipient relations.

Donors can help overcome some of the absorptive capacity problems by not requiring counter-fund and providing technical assistance in aid management and administration. Other measures can also be considered to monitor aid administration. For example, aid may be used in helping national governments to strengthen democratic institutions designed for checks and balance on government expenditure.

Finally, the possibility of Dutch disease is remote, as these countries do not operate at full employment, a vital assumption of the Dutch disease hypothesis. Moreover, the Dutch disease syndrome can be avoided in a number of ways. First, if aid is used for direct imports and/or technical assistance, then there is no need for real appreciation for

²⁸ For evidence of Dutch disease syndrome in Pacific micro states, see Laplange, Treadgold and Baldry (2001).

²⁹ dos Reis (2004) highlights the usefulness of a fiscal insurance scheme for the countries of the Caribbean Currency Union. Such a scheme can alleviate problems of policy coordination within a currency union.

³⁰ Some Pacific countries already have a fiscal stabilization fund. The regional stabilization fund can supplement the national fund.

resource transfer to occur. Second, if aid is used for productivity enhancing investment, then that offsets the impact of real exchange rate on competitiveness.³¹

5.2 Monetary policy

Growth-oriented monetary policy has two features. First, as noted in the discussion about fiscal policy, monetary policy has to be accommodative to governments' investment needs. This is premised on the large body of empirical evidence that moderate inflation does not harm economic growth, and may even be necessary. Furthermore, an accommodative monetary policy is needed to ease the counter-fund problem for the utilization of aid and hence enhance the absorption of aid.³²

Second, the monetary authorities should use low cost directed credits to support labour-intensive SMEs. The subsidized special credit programmes, of course, distort the credit market as well as run the risk of being infected with rent-seeking behaviour. However, the costs of distortions and rent-seeking have to be weighed against the costs of market failures in the credit market which result in discrimination against the SMEs and the agriculture sector.³³

One may have concerns about the impact of low interest policies on savings and financial sector development. To begin with, low real interest rates must not mean negative real deposit interest rates which, in fact, have been the case in a number of Caribbean and Pacific Island economies. Second, empirical evidence shows that in low-income countries, financial development is mainly demand led. That is, it follows growth. This is consistent with the observation that current income plays a more dominant role in household savings decisions than the interest rate. Additionally, as the experience of Singapore shows, rapid mobilization of domestic savings depends more on non-market measures such as compulsory savings schemes and public sector surpluses than on real interest rates. Finally, low interest rate policy has advantages for both public debt sustainability and low inflation. It reduces interest payments on public debt as well as the business cost on account of working capital. Both factors contribute to low inflation.

5.3 Exchange rate and capital account policies

The Caribbean and Pacific Island economies have exchange rate systems ranging from currency union to dollarized and floating regimes. As expected, the dollarized economies have inflation rates close to the rates in the country of the currency they use,

³¹ See Chowdhury and McKinley (2007).

³² The traditional rationale for aid is to fill the savings-investment gap and the current account gap. The savings-investment gap is generally related to government budget deficit. Aid funds are converted into domestic currency to be spent by the government which causes inflationary pressure leading to real appreciation. The real appreciation, in turn, causes higher imports to be financed by foreign currencies made available through aid in the first place. This is the normal channel through which aid gets *spent* and *absorbed*. Conservative fiscal and monetary policies, thus, only lead to accumulation of foreign reserves and defeat the purpose of aid. See Chowdhury and McKinley (2007).

³³ See Chowdhury (2006) for an illustration of various monetary policy instruments for achieving both employment and moderate inflation targets.

and the countries with an independently floating system have higher inflation rates. The economies with a pegged exchange rate system have mixed experiences with inflation.

As opposed to IMF's suggestion for freer and more flexible currency regimes, recently some observers argued for a dollarized regime for the Pacific region, and the use of the Australian dollar in the Pacific economies.³⁴ The argument is based on the insufficient depth of domestic financial and foreign exchange markets to support the liquidity necessary to maintain a freely floating exchange rate, and the lack of skilled personnel to run a central bank. The adoption of a strong foreign currency is also likely to impose fiscal discipline in economies where maintaining central bank independence is difficult. Some have also examined the possibility of forming a currency union like the East Caribbean Monetary Union.³⁵

While dollarization improves macroeconomic stability, the main objection to it may arise from the vastly different types of shocks between the Pacific Island economies and the country of strong currency (Australia, New Zealand and the US). Thus, responses to these shocks require some macroeconomic policy independence which will be lost if dollarized. Very low inflation rates of the strong currency country may be too constraining for these economies, which are prone to supply shocks and need to undergo structural change. Furthermore, dollarization will deprive them of seigniorage, and hence an important source of revenue for countries with a poor domestic revenue base.

The currency unions are also not without problems, especially when there is a lack of significant convergence of macroeconomic indicators. At the same time, when their trade structure and partners are very similar, they are likely to suffer from the same terms-of-trade shocks almost simultaneously. This can place enormous pressure on the fiscal balance and monetary situation of all member countries, trying to adjust to the shock.

Considering the pros and cons of various exchange rate regimes, it seems reasonable that the small island economies should follow an adjustable peg exchange rate system. As mentioned earlier, Singapore has been quite successful in using an adjustable peg exchange rate system to contain inflation.³⁶

However, an economy (or economic union) cannot have macroeconomic policy independence and open capital account under a pegged exchange rate system. This means there should be some restrictions on capital mobility. Neither the Caribbean nor the Pacific region receives much short-term private capital. Their main source of outside capital is foreign aid and workers' remittance, which are not sensitive to interest rates. Their main problem is capital outflow, and it makes sense to have some controls on

³⁴ de Brouwer (2002); Duncan (2002). Jayaraman (2005) does not find much support for using Australian dollar. Based on trade flow statistics, he argued that there is stronger case of adopting an Asian currency. Bowman (2006) concludes: 'dollarization to the US dollar, the de-facto standard in Asia, or a move to a common currency may be preferable alternatives to dollarizing to the Australian dollar'.

³⁵ Jayaraman, Ward and Xu (2005).

³⁶ See Drake (1983) for a comprehensive discussion of exchange rate choices for small open economies. Drake suggests an intermediate regime between an absolutely fixed exchange rate regime with no monetary discretion and a fully flexible exchange rate regime with monetary discretion.

capital flights. Restrictions on short-term capital outflows do not necessarily create any disincentives for long-term foreign direct investment.

5 Concluding remarks

This paper has reviewed the macroeconomic performance of Caribbean and Pacific Island economies. Given the high volatility of their output growth and its adverse impacts on long-term growth as well as on the poor, the paper argued for the output stabilization role of macroeconomic policies. Drawing on the experience of Singapore, the paper also argued that contrary to the conventional wisdom, macroeconomic policies can play both stabilization and directly growth-promoting roles in highly open small economies. However, it requires some appropriate institutional frameworks to regulate the labour market, mobilization of savings, movements of short-term capital (capital flights), and the government's fiscal behaviour. Given high aid-dependency, there also needs to be improvement in aid delivery and aid management.

However, no one country is identical to another, and there are considerable differences among groups of countries. Thus, small island states need to be innovative in designing their own institutions based on their own history and context. Furthermore, given their size, remoteness and other constraints, it seems they would be better off by pooling regional capacity and resources. This would entail opening up their own markets to inflows of goods, services, capital and labour from the region, something akin to a currency union.

References

- Abbott, D., and S. Pollard (2004). *Hardship and Poverty in the Pacific*. Manila: Asian Development Bank.
- Armstrong, H., R. de Kervenoael, X. Li, and R. Read (1998). 'A Comparison of the Economic Performance of Different Microstates and between Microstates and Larger Countries'. *World Development*, 26 (4): 639-56.
- Atkins, J. P., S. A. Mazzi, and C. D. Easter (2000). 'Commonwealth vulnerability Index for Developing Countries: The Position of Small States'. Economic Paper 40. London. Commonwealth Secretariat.
- Bourne, C. (2005). 'Poverty and its Alleviation in the Caribbean'. Lecture presented at the Alfred O. Heath Distinguished Speakers' Forum, 14 March. St. Thomas: University of the Virgin Islands.
- Bowman, C. (2006). 'The Governor or the Sheriff? Pacific Island Nations and Dollarization'. Canberra: Asia Pacific School of Economics & Government, ANU. Mimeo.
- Briguglio, L. (1995). 'Small Island Developing States and Their Economic Vulnerability'. *World Development*, 23 (9): 1615-32.
- Caram, A. (1989). 'Guidelines for Monetary Policy in Small Developing Countries'. In J. Kamanarides, L. Briguglio and H. Hoogendonk (eds), *The Economic Development*

- of Small Countries: Problems, Strategies and Policies*. Delft: Eburon (in conjunction with the Foundation for International Studies, University of Malta and the Faculty of Economics, University of Amsterdam), 39-56.
- Chowdhury, A. (2006). 'The "Stabilization Trap" and Poverty Reduction—What Can Monetary Policy Do?'. *Indian Development Review*, 4 (2): 407-32.
- Chowdhury, A., and T. McKinley (2007). 'Gearing Macroeconomic Policies to Manage Large Inflows of ODA: The Implications for HIV/AIDS Programmes'. WIDER Research Paper 2007/34. Helsinki: UNU-WIDER.
- Commonwealth Secretariat (2000). 'Small States: Meeting Challenges in the Global Economy'. Paper prepared for the Commonwealth Secretariat/World Bank Joint Task Force on Small States. Washington DC: Commonwealth Secretariat-World Bank.
- Corden, M. (1984). 'Macroeconomic Targets and Instruments for a Small Open Economy'. *Singapore Economic Review*, 29 (2): 27-37.
- de Brouwer, G. (2002). 'Should Pacific Island Nations Adopt the Australian Dollar?'. *Pacific Economic Bulletin*, 15 (2): 161-69.
- de Ferranti, D., G. Perry, I. Gill, and L. Servén (2000). *Securing Our Future in a Global Economy*, Washington DC: World Bank.
- dos Reis, L. (2004). 'A Fiscal Insurance Scheme for the Eastern Caribbean Currency Union'. Paper presented at the XVIII G24 Technical Group Meeting, 8-9 March.
- Drake, P. (1983). 'Monetary and Exchange Rate Management in Tiny Open Underdeveloped Economies'. *Savings and Development*, 7 (1): 4-19.
- Duncan, R. (2002). 'Dollarizing the Solomon Island Economy'. *Pacific Economic Bulletin*, 15 (2): 143-46.
- Easterly, W., and A. Kraay (2000). 'Small States, Small Problems? Income, Growth, and Volatility in Small States'. *World Development*, 28 (11): 2013-27.
- ECLAC (2006). *Economic Survey of the Caribbean 2005-2006*. Santiago: ECLAC.
- ESCAP (2006). *Economic and Social Survey of Asia and the Pacific, 2006*. New York and Bangkok: UN-Economic and Social Commission for Asia and the Pacific, 66-7.
- Eslava, M. (2006). 'The Political Economy of Fiscal Policy: Survey'. Inter-American Development Bank Working Paper 583. Washington, DC: IADB.
- Feeny, S. (2007). 'Growth Impacts of Foreign Aid to Melanesia'. *Journal of the Asia Pacific Economy*, 12 (1): 34-60.
- Fichera, V. (2006). 'The Pacific Islands and the Eastern Caribbean Currency Union: A Comparative Review'. In C. Browne (ed.), *Pacific Island Economies*. Washington DC: IMF.
- Gavin, M., R. Hausmann, R. Perotti, and E. Talvi (1996). 'Managing Fiscal Policy in Latin America and the Caribbean: Volatility, Procyclicality and Limited Credit-worthiness'. RES Working Paper 326. Washington, DC: Inter-American Development Bank.

- Glewwe, P., and G. Hall (1998). 'Are Some Groups More Vulnerable to Macroeconomic Shocks than Others? Hypothesis Tests Based on Panel Data from Peru'. *Journal of Development Economics*, 56 (1): 181-206.
- Huff, W. (1995). 'What Is the Singapore Model of Economic Development?'. *Cambridge Journal of Economics*, 19 (6): 735-59.
- Jayaraman, T. (2005). 'Dollarization of the Pacific Island Countries: Results of a Preliminary Study'. Working Paper 2005/1. Suva: Department of Economics, University of South Pacific.
- Jayaraman, T., B. Ward, and Z. Xu (2005). 'Are the Pacific Islands Ready for a Currency Union?: An Empirical Study of Degree of Economic Convergence'. Working Paper 2005/2. Suva: Department. of Economics, University of South Pacific.
- Kalecki, M. (1976). *Essays on Development Economics*. Brighton: Harvester Press.
- Khatkhate, D., and B. Short (1980). 'Monetary and Central Banking Problems of Mini States'. *World Development*, 8 (12): 1017-25.
- Kuznets, S. (1960). 'Economic Growth of Small Nations'. In E. A. G. Robinson (ed.), *The Economic Consequences of the Size of Nations*. London: Macmillan.
- Laplangue, P., M. Treadgold, and J. Baldry (2001). 'A Model of Aid Impact in Some South Pacific Microstates'. *World Development*, 29 (2): 365-83.
- Lodewijks, J. (1988). 'Employment and Wages Policy in Papua New Guinea'. *Journal of Industrial Relations*, 30 (3): 381-411.
- Milner, C., and T. Westaway (1993). 'Country Size and the Medium-term Growth Process: Some Cross-country Evidence'. *World Development*, 21 (2): 203-11.
- Nadal-De Simone, F. (2000). 'Monetary and Fiscal Policy Interaction in a Small Open Economy: The Case of Singapore'. *Asian Economic Journal*, 14 (2): 211-31.
- Oxfam (2007). 'Poverty in the Pacific'. Available at: www.oxfam.org.nz.
- Pavlov, V., and C. Sugden (2006). 'Aid and Growth in the Pacific Islands'. *Asian-Pacific Economic Literature*, 20 (2): 38-55.
- Perry, G. (2003). 'Can Fiscal Rules Help Reduce Macroeconomic Volatility in Latin America and the Caribbean Region?'. WB Policy Research Working Paper 3080. Washington, DC: World Bank.
- Scitovsky, T. (1958). *Economic Theory and Western European Integration*. London: Allen & Unwin.
- Siwatibau, S. (1993). 'Macroeconomic Management in the Small Open Economies of the Pacific'. In R. Cole and S. Tambunlertchai (eds), *The Future of the Asia-Pacific Economies – Pacific Island Economies at the CrossRoads?* Canberra: Pacific Development Centre and the National Centre for Development Studies, ANU.
- Srinivasan, T. N. (1986). 'The Costs and Benefits of Being a Small Remote Island Land-locked or Mini-state Economy'. *World Bank Research Observer*, 1 (2): 205-18.
- Streeten, P. (1993). 'The Special Problems of Small Countries'. *World Development*, 21 (2): 197-202.

- Toh, M.-h. (2005). 'Singapore'. *Pacific Economic Outlook, 2005-2006*. Hong Kong: APEC Centre.
- Treadgold, M. (1992). 'Openness and the Scope for Macroeconomic Policy in Micro States'. *Cyprus Journal of Economics*, 5 (1): 15-24.
- UNDP (various years). *Human Development Report*. New York: UNDP.
- Williamson, J. (2004). 'The Washington Consensus as Policy Prescription for Development'. WB Lecture Series Practitioners of Development. 13 January. Washington, DC: World Bank.
- World Bank (1998). *Enhancing the Role of Government in the Pacific Island Economies*. Washington, DC: World Bank.
- World Bank (2000). *World Development Report 2000/2001: Attacking Poverty*. Washington, DC: World Bank
- World Bank (2002a) 'Development Assistance and Economic Development in the Caribbean Region: Is there a Correlation?'. Report No. 24164-LAC. Washington, DC: Caribbean Group for Cooperation in Economic Development, World Bank,.
- World Bank (2002b). 'Caribbean Economic Overview, 2000: Macroeconomic Volatility, Household Vulnerability, and Institutional and Policy Responses'. Concept Paper. Washington, DC: Caribbean Group for Cooperation in Economic Development, World Bank.
- World Bank (2006). *World Economic and Social Survey, 2006: Diverging Growth and Development*. Washington, DC: World Bank.
- Worrell, D. (1987). *Small Island Economies: Structure and Performance in the English-Speaking Caribbean since 1970*. New York: Praeger.